UNITED STATES OF AMERICA
DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
NATIONAL ORGANIC PROGRAM

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NATIONAL ORGANIC STANDARDS BOARD

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PUBLIC COMMENT WEBINAR

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TUESDAY
APRIL 19, 2022

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The Board met via Videoconference, at 12:00 p.m. EDT, Nate Powell-Palm, Chair, presiding.

MEMBERS PRESENT

NATHAN POWELL-PALM, Chair
AMY BRUCH
BRIAN CALDWELL
GERARD D'AMORE
CAROLYN DIMITRI
LIZ GRAZNAK
RICK GREENWOOD
KIMBERLY HUSEMAN
MINDEE JEFFERY, Vice Chair
ALLISON JOHNSON
DILIP NANDWANI
LOGAN PETREY
KYLA SMITH, Secretary
WOOD TURNER
JAVIER ZAMORA
ALSO PRESENT
MICHELLE ARSENAULT, Advisory Committee Specialist, National Organic Program
JARED CLARK, National List Manager, National Organic Program
DAVID GLASGOW, Associate Deputy Administrator, National Organic Program
ERIN HEALY, Division Director, Standards, National Organic Program
ANDREA HOLM, Materials Specialist, National Organic Program
DEVON PATTILLO, Acting Assistant Director, Standards, National Organic Program
JENNIFER TUCKER, Deputy Administrator, National Organic Program; Designated Federal Officer
MS. ARSENAULT: So welcome everybody
for joining us for the National Organic Standards
Board oral comment webinars, today and Thursday.
It's the beginning of the NOSB meeting which will
continue on into next week. I'm going to go read
through some administrative stuff, so if you're
on the phone with us, we do have a slide on the
screen and I'll just verbally tell you what you're
not seeing on the screen.
If you're having online issues, audio
issues, you can always dial in on the phone. The
numbers are on the screen in the chat box, if you're
with us that way. They also appear on the NOSB
meeting webpage where you can find them there.
We ask that you do please stay on mute. The chat
is enabled, so you guys can talk with each other
via chat. If you look at the -- you find your Zoom
taskbar, it's in the center of the task bar. You
can chat with each other, but chats are not part
of the public record. And if you're a public commenter, you have to sign up in order to be called on to speak today.

We have closed captioning enabled, and you can also find that in your Zoom taskbar, a little to the right, you can turn it on or off for yourself, so you can see it if you want, and turn it off if you don't want to see it. You can also change the font size, if you need it bigger. Please don't use the raise hand feature. Again, commenters registered in advance and Nate, the board chair, will be calling on people in turn.

You can customize your Zoom view. So what you can see on the screen and the upper right hand side of your Zoom window you'll see nine boxes, kind of little Brady bunch thing. You can change what you see on your screen. We are going to pin my camera, so which will be pointed at the speaker timer. So that should always appear for everybody, no matter how you rearrange your view.

If you're having technical problems,
you can always contact Zoom support.zoom.us, in the upper right hand. They have a contact us button. And Andrea just chatted that web address into the chat there. We are recording and have transcriptionists on the line with us today, and we're going to post the transcripts on the NOP website as soon as they're available. It's usually a couple of weeks after the conclusion of the board meeting. Next slide, please, Jared.

So for speakers, make sure that your name is displayed in your video tile correctly so we can find you when it's time for you to speak, just to make sure you're on the call with us. And we can unmute you if you're having trouble unmuting yourself. You should have access to both your mic and camera and be able to control those yourself. But we do ask that people please stay on mute just to keep the background noise down.

When you're called on, we're going to -- you can unmute yourself and then turn your camera on. If you want, it's optional, you don't have
to be on camera. The mic is on the bottom left of the Zoom taskbar. And if you're on the phone only, you may have to hit, and you don't have a mute button on your phone, you may have to hit star 6 in order to mute and unmute yourself, it toggles.

When you come to the mic, you're going to state your name and affiliation for the record at the start of the comment, and then I'll start the timer. And each commenter has 3 minutes to speak. We'll use the timer and we're going to test it during the intro here, just so you guys can hear what it sounds like. It also will -- there's a timer on screen, so I'm going to flip over to my other camera here. So you should be able to see that right now it's showing 5 seconds, and it's backwards for me, so hopefully it's right for you guys. So, after your comment is done, either the timer's going to go off and tell you you're done, please finish your sentence. And then Nate will open it up to the board members to ask you questions. So you might not go on mute immediately
after you're done with your comments.

All right, I think I am done with administrative stuff, and I'm going to turn the mic now over to Jenny Tucker, the National Organic Program, Deputy Administrator. Jenny, welcome.

MS. TUCKER: All right. Thank you, Michelle. And welcome everyone. I'm Jennifer Tucker, Deputy Administrator of the National Organic Program. Welcome first to all our National Organic Standards Board members. This is our fourth online meeting together, and we are happy to continue to have such an engaged audience for this forum. I would particularly like to welcome our four new board members. We have Liz Graznak from Missouri, we have Allison Johnson from California, Dr. Dilip Nandwani from Tennessee, and Javier Zamora from California. They started their work on the board this spring. We're going to give them a round of Zoom applause like this, which is waving your hands in front of the camera to applaud.

So welcome to all of our new and our returning
board members.

For all our public commenters, thank you again for engaging in this process with us. I also thank our audience who are here to bear witness to this public meeting process. We are glad that you are here. This webinar opens a series of virtual webinars that will occur over multiple days, 2 days this week, and 3 days next week, meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website. Transcripts for all segments will be posted once completed.

This meeting, like other meetings of the National Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual. I will act as the Designated Federal Officer for all meeting segments. Nate Powell-Palm, our new board chair will take the helm for this session. Before we start, let's give Nate a round of applause in advance for a great meeting. And Nate,
congratulations on your board chairmanship.

MR. POWELL-PALM: Okay.

MS. TUCKER: As I noted at the start of the last NOSB meeting, in an open transparent process, mutual respect is critical. We do ask you in advance to avoid personal attacks and disparagement, please engage with grace. To close, I thank the National Organic Program team. This is an amazing team that I am honored and privileged to work with every single day. Michelle keeps this world spinning for us. We also have Jared Clark, Devon Pattillo, Andrea Holm, Dave Glasgow, and our Standards Director, Erin Healy.

So big round of applause to both program staff and the board and participants and public commenters. So thank you all of you. I am now going to hand the mic back for a roll call of NOSB members and NOP staff. And Michelle, I believe I'm handing it back to you. Is that correct?

MS. ARSENAULT: Off the speaker timer there. Nate Powell-Palm?
CHAIR POWELL-PALM: Present. And good morning from Montana.

MS. ARSENault: Good morning.

Mindee? I can't see everybody now. So I'll listen to your --

MEMBER JEFFERY: Present. Thank you.

MS. ARSENault: Hi, Mindee. Kyla Smith?

MEMBER SMITH: I'm here. Good morning.

MS. ARSENault: Good morning, Kyla.

MS. SMITH: Afternoon, I guess it is now outside.

MS. ARSENault: Good day, good day. That works. Amy Brooke?

MEMBER BRUCH: Good morning, everybody.

MS. ARSENault: Brian Caldwell?

MEMBER CALDWELL: Here.

MS. ARSENault: Hi, Brian. Jerry D'Amore?
MEMBER D'AMORE: Here as well.

MS. ARSENAULT: I'm going to call Carolyn Dimitri, but I think Carolyn's going to be a little delayed joining us. Great. Liz Graznak?

MEMBER GRAZNAK: Present. Good morning from mid-Missouri.

MS. ARSENAULT: Welcome, Liz. Rick Greenwood?

MEMBER GREENWOOD: Present.

MS. ARSENAULT: Okay. Kim Huseman?

MEMBER HUSEMAN: Hello. Good morning.

MS. ARSENAULT: Allison Johnson?


MS. ARSENAULT: Help is in the room. We understand. Dilip Nandwani?

MEMBER NANDWANI: Good morning from Tennessee. Thank you.

MS. ARSENAULT: Good morning, Dilip.
Logan Petrey?

MEMBER PETREY: Hi. Present. Thank you.

MS. ARSENAULT: Welcome Logan twice.

Wood Turner?

MEMBER TURNER: I'm here. Good morning.

MS. ARSENAULT: Hello. Good morning, Wood. And Javier Zamora?

MEMBER ZAMORA: Buenos dias a todos here from beautiful rainy Watsonville, California.

MS. ARSENAULT: Excellent. Thank you. All right. So Nate, everyone is here. Carolyn, I expect to be joining us shortly, so we can -- I'll give her a shout out when she joins, if you want. Right. And Jenny already introduced NOP staff. So I'm going to hand the mic to you now, Nate, to take over the rest of the meeting. And at some point Nate will test the speaker timer just so people can hear it and kind of know what to listen for.
CHAIR POWELL-PALM: Sounds good. I heard it was upgraded to be very pleasant. So hello everybody, I'm Nate Powell-Palm, I am a farmer based in Montana, just outside at Bozeman, and I am stoked to be here with you all today. It's going to be a really great meeting, and I'm excited to hear from our community and have the opportunity for our new members especially, to get their feet wet with this process and learn how and why organics is so great, through this feedback process.

When we get started off here, it's just a quick reminder that we actually do have a policy and procedures manual about public comments. So all speakers who will be recognized, signed up during the registration period, persons must give their names and affiliations for the record at the beginning of their public comment. Proxy speakers are not permitted. Individuals providing public comment shall refrain from making any personal attacks or remarks that might impugn the character
of any individual.

Members of the public are asked to define clearly and succinctly the issues they wish to present before the board. This will give the NOSB members a comprehensive understanding of the speaker's concerns. I'll call on speakers in the order of the schedule and we'll announce the next person or two so that they can be prepared. Please remember to state your name and your affiliation, and then we'll start the timer. Board members will indicate to me if they have questions, and I'll call on them. Only NOSB members are allowed to ask questions.

All right. So, let's get started. Because our first member is going to be our first commenter, former member, is going to be Steve Ela. And so real quick, Steve, before we get started, Michelle, would you play the timer real quick, so we can hear the chime of the end of a comment? Thank you.

MS. ARSENAULT: Could you guys hear
that very well?

CHAIR POWELL-PALM: Kind of quiet, but I think we'll get it.

MS. ARSENAULT: Right. All right. The timer is on screen as well, so you'll be able to see it counting down. Nate, I just want to add one thing, I forgot to mention that if you have a slide deck, we'll make sure it's up on screen before you get started with your comment. We'll get all settled first before I start the timer.

CHAIR POWELL-PALM: Yes. If any commenters are going to be joining exclusively by phone and you're not able to name yourself, please send Michelle a message. If you're on, we're going to be calling folks out. And if we don't see you, we're going to skip over you, but we're going to try to give you ample opportunity to make yourself known. All right. If we're ready, the floor is yours. Steve.

MR. ELA: Good morning, everybody. I'm Steve Ela, organic fruit farmer in little town
of Hotchkiss in Western Colorado. Really organic farmer, but I also am sometimes advisor of the National Organic Coalition. So with that, I would like to start my comments. Really I want to speak on the highly soluble nitrogen issue, but before I do that I want to address something with PDS.

I would like to propose a change to the policy and procedures manual that gives ex-NOSB members an extra 30 seconds in public comment for every year they served on the board. So I'll let you take that under consideration. And then with that, I'll jump into the highly soluble nutrient side. I'd like to welcome the new board members and say hi to all the old board members. For the new board members, I know there is a lot of time required, and some of it is dealing with some sets that seem really mundane, but I hope that in your 5 years of tenure you will have several topics that you feel like really make a difference to the organic community. And with that, I think the highly soluble nutrient, nitrogen proposal is one
of those topics.

The basis of it really as a practice standard will govern the nature of organic farming into the future. One of the big issues with it is to limit the number of highly soluble nutrients that are applied and honor the mantra of feeding the soil. Organic farming has been based on that and is not a nutrient substitution process. And by limiting the highly soluble nutrients that are applied through a practice standard that will help to honor that mantra of which OFA was originally designed.

One of the comments has been that this standard is not necessary at this time. However, as was evidenced by the Ammonia Extract petition, there are new and novel materials coming out. And so this is needed for the future to limit the number of highly soluble nutrients that can be used until they're able to be submitted by petition and prohibited, similar to the ammonium extract petition that we've just received last meeting.
The other comment was that this overburdens farmers with too much paperwork, and that'll be difficult for certifiers.

    My response to that is that if you do not use materials that are less than three-to-one carbon and nitrogen ratio, all you have to do is check the box and say I don't use this, and you're done. There is no burden whatsoever if you use materials above that three-to-one ratio. If you use them below, then just like with sodium nitrate in the past, it is easy to document that, certifiers, nutrient manufacturers, material review organizations will all have incentive to list that three-to-one ratio, and so it should be fairly clear once, this system gets started.

    And finally, I'm going to address the law of return and recycling. Organics is dedicated to recycling nutrients. However, that does not mean we have to recycle every nutrient. For example, we don't recycle bio solids or colored papers from newspaper. So we do recycle
things, but it is really the whole product. And just like when you eat dinner, you're looking for wholesome foods and other things; you're not just looking for a single vitamin to feed yourself. So organic is dedicated to that soil, it is dedicated to recycling of the whole nutrient, and I'd be happy to answer any questions that you have about this topic.

CHAIR POWELL-PALM: Excellent time. Good precedent to set, right on the money. Members, do we have any questions for Steve? Logan?

MEMBER PETREY: Hi, Steve. You knew I'd be asking a question.

MR. ELA: Of course.

MEMBER PETREY: I'll keep it simple. Thank you for coming on. I appreciate it. Good to see you. So you mentioned highly soluble nutrients and not so much, or -- I mean, I know we're talking about nitrogen here, but you did reference nutrients a few times. And so, do you
think that this rule should expand to all nutrients and not just nitrogen, including calcium, boron and other highly soluble nutrients? Should we start expanding onto that and putting limits on?

MR. ELA: You know, the nutrients designation is a habit, really this pertains to fertilizers as it should. That was from the comments of last fall where people said we should limit it. I don't think I'm going to go down that path of all highly soluble nutrients. Just, I mean, we already do with calcium fluoride and some of the other nutrients. So there -- you know, there is a precedent for that, but really this motion is about highly soluble nitrogen fertilizers and their impact on the soil. I think some of the other nutrients are -- like calcium fluoride tend to be more foliar nutrients, so it's a bit of a different story. So I'll just stick to the nitrogen side of it right now, just to keep it more focused.

MEMBER PETREY: Okay. Fair. Thank
you.

CHAIR POWELL-PALM: Amy?

MEMBER BRUCH: Sure. Hi, Steve.

Good to see you again. Thank you so much for your continued contributions to the organic community and your previous board service. I really appreciate your written comments and your current oral comments. This is a really important topic. You did bring in the fact of vitamins and just kind of how we can digest this principle for -- I mean, maybe non-farmers, just the complexities of what vitamins do to the body versus a complex diet. So I wanted to give you a little bit of time to kind of elaborate on just the solubility portion of nitrogen versus the protein component of nitrogen.

MR. ELA: Sure. Thanks, Amy. I know I've talked with a number of people that wonder where the three-to-one ratio comes from, and really that ratio is right at the break point between proteins and amino acids, and just more of a pure
nitrogen in the form of nitrate and ammonia. And
the basis of organic agriculture has always been
to feed the soil, and by feeding the soil protein
or even amino acid, it means the soil biota have
to break that down into -- to make the nitrogen
available as a plant, available nutrient. And so
that three-to-one carbon and nitrogen ratio really
is a break where we feed the soil more complex
nutrients and that soil and the biota has to respond
with that complex nutrient. And that's always
been a mantra of organic agriculture.

When we go below a three-to-one ratio
such as for nitrate and ammonia, then we're really
into the kind of the input substitution mode. And
that is something that organic agriculture has not
been about. We really are dedicated to ecosystems
and soils processes and not just input
substitutions. So analogy for humans is if we,
you know, we take whole foods, you know, that helps
our gut flora, that's really the way to adequate
nutrition rather than just supplementing or just
eating a vitamin. The 20 percent ratio does let in emergency use or cold soils, it does allow some use of these things, just like you might take a extra vitamin and when you're short of something. But it doesn't allow for the whole use of this, and it also helps put some guardrails on the system. It very explicitly states for manufacturers as they develop some of these products what the potential is. It also means it gives the NOSB time to review these things before they're widely used. So I think it helps set appropriate boundaries. But ultimately, it's just really, you know, it's eating well and it's feeding the soil well and -- versus an input substitution model. So, I think for that it's really important for the future of organics.

MEMBER BRUCH: Thank you, Steve. Appreciate it.

CHAIR POWELL-PALM: Anybody else? Questions for Steve? All right. Well, thank you so much, Steve.
MR. ELA: Good luck to everybody.

CHAIR POWELL-PALM: All right. Next up, Yu Yi Tan, and I don't think we have seen you, if you're here Yu Yi on the list or on the -- present in the Zoom. So please speak up if you are here, otherwise we'll move on. All right. And if you are here and are having tech difficulties, please just send an e-mail to Michelle, and we can try to put you in at the end there.

All right. Next up is going to be Terry Shistar with Beyond Pesticides; after that, Jay Feldman with Beyond Pesticides; and after that, Youngblood with NOC.

Terry? And I think we're going to have a presentation pulled up for you. Here we go.

Thank you, Andrea.

MS. SHISTAR: Okay. Okay. My name is Terry Shistar, and I'm on the board of directors of Beyond Pesticides. This is kind of highlights of our comprehensive written comments. Please deny the petition for CPC, a toxic quaternary
ammonia compound that is being petitioned for use on raw organic poultry. Quats include several toxic sanitizers and disinfectants, as well as the highly toxic herbicides paraquat and diquat. CPC residues have been discovered on treated surfaces and poultry skin, exposing workers and consumers to unlabeled pesticide residues. It is unnecessary in organic production.

Please pass the proposal, limiting the use of highly soluble nitrogen fertilizers to protect organic integrity, consistent with the principle of feeding the soil, not the plant. Awareness is growing about the environmental and health impacts of plastic and the microplastic particles to which it degrades. The NOSB should initial action to eliminate all uses of plastic and organic production and handling, including packaging. Biodegradable, bioplastic mulch should not be relisted.

Many NOSB recommendations have not been addressed by NOP. It is your role in the NOSB to
guide NOP and ensure that the conventional
industrial agriculture clients of USDA do not
control the organic program. Now, NOP has come
to the organic community with a request for input
concerning the priorities to be assigned to
recommendations it has failed to complete.

The organic community has spoken on
these issues, but NOP has not done its job. It's
improper for NOP to now pit segments of the organic
community against one another. NOP must do its
job with no excuses. It must ensure that OMB, for
example, understands the structure of the organic
program, including why nationalist changes as
material sunset must give higher priority to
completing NOSB recommendations. It is NOP's
responsibility to just get it done.

Appendix A of our big picture comments
contains our analysis about standing NOSB
recommendations. In classifying its progress,
NOP creates some categories for which it has
decided to ignore the recommendations closed or
indefinitely delayed implementation on hold. On hold includes prohibition of aeroponics, clarifying emergency use of synthetic parasiticide, all recommendations concerning excluded methods, the procedure for examining ancillary substances and ammonia extracts.

Closed includes containers, eliminating the incentive to convert native ecosystems to organic crop production and sodium nitrate. In addition, other recommendations like the 2010 recommendation on greenhouse production have been ignored. Please see Jim Riddle's comments concerning that. Thank you.

CHAIR POWELL-PALM: All right. Thank you so much. And bear with me, everyone, while we have this screen up. There we go. Okay. Any questions for Terry? All right. Seeing none. Thank you, Terry.

MS. SHISTAR: Thank you.

CHAIR POWELL-PALM: Next up will be Jay Feldman, followed by Abby Youngblood, and Alice
Runde with NOC, after Abby. Jay?

MR. FELDMAN: Hi. I'm Jay Feldman, executive director of Beyond Pesticides, and a former NOSB member. Welcome to new, and hi to returning board members. Thank you for your service. Please see our extensive written comments on this meeting's agenda.

Today, I'd like to explain our perspective on the NOSB's role and why we have been engaged with organic for over 40 years. Leadership, this is why the NOSB exists, a stakeholder board empowered by Congress to lead USDA on organic transition and standard-setting to lead the transition away from chemical-intensive agriculture. Your leadership is critically important in the midst of existential public health threats from toxic-chemical-induced diseases, biodiversity collapse and the climate emergency. The need for structural changes or systemic change was in effect recognized on the first day of the Biden administration with
executive memorandum on modernizing regulatory review. It recognizes the need for our holistic approach to government action, requiring agencies "to ensure that regulatory initiatives, promote public health and safety, economic growth, social welfare, racial justice, environmental stewardship, human dignity equity, and the interest of future generations."

In eliminating fossil-fuel-based pesticides and fertilizers, we achieve this. Stop hazardous exposure to toxics with multi-generational adverse effects, improve the health and welfare of communities, protect people of color and protecting farm workers where pesticides are used.

And fenceline communities where toxic pesticides are produced. Protect and enhance ecosystems and utilize ecosystem services. Respect life as opposed to setting allowable levels of harm and inequitable consequences. Every technical review that informs your actions must
include a cradle-to-grave analysis for you to do  
this and fulfill your statutory mandate in  
determining allowable materials on the national  

e lens.

  
    Last week, the deputy administrator for  
USDA's NOP said that the Office of Management and  
Budget is a roadblock to your decisions. The  
failure of USDA to follow through on your  
recommendations is a national scandal and tragedy.  
    And in our view, fails to comply with the law.  
    As the NOSB, we urge you to call out, reject and  
stand up to the undermining of your work and false  
arguments of economic dislocation. It harms  
consumer and farmer confidence in the organic label  
and the growth of the organic sector.  

    With this, USDA only helps to elevate  
the chemical industry, industrialized  
agriculture, factory farms, abusive working  
conditions and deadly diseases, and cripples the  
foundation of organic principle of continuous  
improvement.
Remember the law's no additions clause that prohibits the secretary without your recommendation from allowing nationalist substances not recommended by the board. Embrace your role in providing advice to the secretary, bring your voice to this forum and the NOSB agenda-setting, use the power of the board resolutions.

And keep pushing back against an agency that still invasions organic as producing niche specialty crops, rather than the original vision in the statute, the cutting edge for the future of agriculture and all land management, ensuring a sustainable -- thank you.

CHAIR POWELL-PALM: Thank you, Jay. Appreciate your comments.

MR. FELDMAN: Thanks.

CHAIR POWELL-PALM: And I see Brian has a question.

MEMBER CALDWELL: Yes. Thanks for your comments. I have two different points here.
And the first one is whether Beyond Pesticides has sort of contamination issues like PFAS and BPA in packaging and those things on their agenda for continued, you know, examination and suggestions. And the second one is when an economic analysis is done on the effects of practices or products, I wonder if Beyond Pesticides has any recommendations about how to assess the effect of -- the possible effect of kind of loss of confidence in the entire label.

In other words, kind of a much bigger picture than just maybe a specific effect on one segment of the industry or something like that. So those two points, please.

MR. FELDMAN: Yes. You know, thank you for your questions, Brian. You know, the whole issue of legacy chemicals has been top of mind in the formulation of the statute and the ongoing implementation. And we struggled with, you know, in eyes on the board, we consistently struggle with background levels, as we call it, right, and how
to incorporate an evaluation of those levels into allowable products, you know, that achieve the label.

And there are clear, you know, indicators of threshold, levels of harm, which we're still working out with PFAS. Obviously, you know, EPA is working on this as we speak. We've been struggling with this with DDT and DDE, the breakdown product for generations now. And so I think our, you know, under this banner of continuous improvement, which we always talk about, we have to figure out what the threshold of elevated residues and threshold of elevated harm is when it comes to these background levels.

We've often used enforcement action levels that are set by EPA and FDA, as enforcement levels, as we ratchet down allowable residues in the, you know, in the food supply. The point here is, however, that we can't put organic at an economic disadvantage when we are essentially living in the toxic soup of past mistakes. And
on the thing that we have to stop, I think is this ongoing contamination from drift, from runoff, from, you know, volatility and airborne transport. And we have to stop allowing that to impose harm on organic production and organic growers. And this is where I think the NOSB can be very helpful in talking about chemical trespass and how it's undermining consumer confidence in the production practices on organic farms, no fault of the organic farmer or the organic processor.

We have to get more engaged in this as a community and be more assertive in stopping that non-target drift in all different forms. So I'm not sure there's an easy answer to the question. I mean, we're struggling this -- Maine, we just have a piece on our website today about the struggles in the state of Maine and an attempt to work with farmers and reimburse farmers to the harm, no fault of their own.

On the economics of all of this, this is always a challenge. You know, we think of three
pillars when we talk about regulation under organic standards, we think about, you know, issues of adverse effects, issues of compatibility with organic systems and what that means to the soil, et cetera. And then we think about essentially, you know, are these materials really essential to organic production.

And that's where I think the board has to look carefully at what is needed and what is not needed. But remember, as you make that evaluation, whether you're talking about soluble fertility or anything else, you can't allow that to trump the other issues of harm and compatibility with organic systems.

So to preserve the value of the label and public trust in that label, we have to think always comprehensively, yes, the economics factors into that, but it has to factor into that in conjunction with the other factors under review. Thanks for your question. It's a complex question.
CHAIR POWELL-PALM: Thank you. Thank you so much for asking that, Brian.

MEMBER CALDWELL: Thanks very much.

CHAIR POWELL-PALM: All right. Next up we have Abby Youngblood followed by Alice Runde, followed by Christie Badger.

Abby, floor is yours.

MS. YOUNGBLOOD: Good afternoon. I'm Abby Youngblood, executive director at the National Organic Coalition. And I would like to start by discussing two critically important issues that the NOSB is considering at this meeting.

First, NOC strongly supports the NOSB proposal to limit fertilizers with carbon-to-nitrogen ratios of three-to-one or less. We think passing this proposal is fundamental to protecting the integrity of the organic program and advancing organic as a climate-smart-system of agriculture.

As time goes by, more soluble crop
fertilizers that do nothing to feed the soil are hitting the market. These materials allow farmers to sidestep the soil health requirements and the organic regulations. The NOSB must act now to regulate these highly concentrated and available sources of nitrogen as a group. The development of these fertilizers is taking place at a fast and furious pace, and it may become difficult to spot each of these new fertilizers.

This proposal lays out a clear and enforceable plan to restrict the widespread reliance on highly soluble nitrogen fertilizers in organic production. The second critical issue that NOSB is voting on this spring is excluded methods. NOC strongly supports the NOSB recommendation for a formal guidance document from the National Organic Program. We agree with the addition of self-fusion and protoplast fusion as outlined with one small suggestion regarding the definition.

On another topic, I want to urge NOSB
members to pay close attention to the annual peer
review audits at the National Organic Program.  
This is the mechanism for oversight over the NOP's
accreditation process, and the NOSB should take
a more active role in evaluating the results of
these reports and flagging issues of concern.

At the NOP's request, for this meeting
the NOSB reviewed a risk mitigation table related
to real and perceived conflicts of interest.
While the information in this table is important,
it's the tip of the iceberg when addressing
conflicts of interest to mitigate risk within the
certification process.

We encourage the NOP and the NOSB to
continue to address risk mitigation in a more
systematic way. NOC also submitted comments this
spring to the National Organic Program, because
we are deeply concerned about USDA's failure to
implement dozens of critically important NOSB
recommendations over the past two decades. The
process is fundamentally broken, and significant
reforms are urgently needed. In our comments we describe 12 recommendations to bring greater accountability and transparency to the NOP's process for implementing NOSB recommendations.

We urge the NOSB to use your platform to communicate directly with the secretary and USDA officials about the need to clear the NOSB backlog and make reforms to the process going forward.

Thank you so much for considering these comments.

CHAIR POWELL-PALM: I think that's the winner so far for timing, so excellent work. Any questions for Abby? Thank you, Abby. Really appreciate your time and comments.

Next up is Alice Runde with NOC, followed by Christie Badger and then Russ Housser.

Alice?

MS. RUNDE: Good afternoon. My name is Alice Runde; I'm the coalition manager for the National Organic Coalition. My comments today pertain to racial equity, technical support and research priorities. On racial equity, there is
increasing amount of evidence regarding the persistent structural racism in our agricultural systems, including organic, which has excluded most black, indigenous and other farmers of color from farm ownership and participation in organic certification.

To make sure this topic receives the time and attention it deserves, we ask the NOSB to establish a diversity, equity and inclusion subcommittee to lead this work on the part of the board. The subcommittee's future recommendations could include changes that would make the certification process more accessible to farmers of color, make organic food more affordable and available, and ensure that organic farming pays living wages for farm workers and farmers.

Recent research shows that the cost of organic certification is a challenge for organic producers, and even more so for bi-crop farmers. The NOSB should strongly advocate for well-functioning and well-funded and
well-publicized organic certification cost share program.

We encourage the NOSB to ask the NOP to establish structure and processes that not only invites but also truly supports black, indigenous and other stakeholders of color to join the NOSB and be able to fully partake in NOSB activities.

The support could include cultural sensitivity or equity training for NOSB members, but also appropriate technical support. On technical support, NOC appreciates the board's work on this important topic, providing support to NOSB members with broad to work full of potential NOSB members, alleviating some of the barriers to participation. It would make a very challenging job more manageable.

We want the board to be appropriately representative of the Organic Community. It is important to fit the assistance to the needs of the individual NOSB members and to ensure the autonomy of the members' voice. The autonomy is
threatened if assistants are hired by USDA. The NOSB should be able to choose who they would like for assistance.

The NOSB should also regard the public at large as a part of its support team to use of the open docket. We believe that there is value in the open docket, and that with additional assistance NOSB members could make use of this tool.

Finally, on research priorities, NOC thanks the material subcommittee for its work in identifying research priorities. While there are particular challenges to conducting both participatory research and on-farm research in various forms, NOC notes the importance of researchers partnering with farmers to engage in the examination of organic systems as they relate to organic as a climate change solution.

There is so much more to climate-smart agriculture than carbon sequestration. We encourage the board to add the following topics
to the research list, pastor research, conservation tele system, P5, alternative to BPA, GE and organic crop coexistence, and various specifications for black, indigenous, Latinx, Asian, and other research farming communities.

All research should be approached through an equity lens, from the research design to results and interpretation.

CHAIR POWELL-PALM: Thank you so much for your comments. Any questions for Alice? All right. Thank you very much, Alice. Next up we have Christie Badger followed by --

PARTICIPANT: Hey, Jerry has a question --

CHAIR POWELL-PALM: Oh, I apologize. Thank you for catching that. Jerry, all yours. Oh, you're on mute, Jerry.

MEMBER D'AMORE: Thank you. And not specifically a question, but I just wanted to give a bit of a shout out to Alice and her group for the work that they did on the NOSB technical
support. It was well-thought-out and appreciated. Thank you.

CHAIR POWELL-PALM: Thank you, Jerry.

All right. Next up we have Christie Badger followed by Russ Hauser and then Amalie Lipstreu.

Christie? Oh, you're on mute, Christie.

MS. BADGER: Thank you. Thanks, and nice to see everyone. I'm Christie Badger, and I'm a consultant with the National Organic Coalition. Thank you for your time and service on the board.

I'll start with oversight improvement to deter fraud. On the inclusion of crop acreage on organic certificates, we are supportive, but suggest a sound and sensible approach as outlined in our written comments. The number of animals in livestock operations should also be listed on certificates, allowing for the ratio of animals to acres of pasture to be considered.
Annotation suggestions. We encourage the NOSB to include an ongoing work agenda item regarding annotation changes to be considered outside of the sunset review process. In order to do that, there's a need for a guidance on annotations, a reference on how they should be written, to allow for consistency and clarity. This work would address one of the most prevalent issues we deal with today regarding certification, inconsistencies among certifiers, by providing better clarity for interpretation and allowance for use.

Carbon dioxide proposal. Send it back to subcommittee. The petition involves two different uses as an acidifying agent in irrigation water in which the pH is high and as a soil or plant amendment. At the fall 2021 meeting, this proposal was sent back to subcommittee to address the second issue. Unfortunately, the spring 2022 proposal includes no discussion regarding CO2 as a plant growth enhancer, yet again.
CPC, we support the recommendation of the handling subcommittee, the petition should be rejected. This petition does serve to point out an important issue that needs to be addressed, however. The notes within the handling scope are referred to as ancillary substances.

While the NOSB made a recommendation regarding how to handle such substances in spring 2016, the NOP has failed to act on this recommendation. Currently, the NOSB has no criteria on how to act on this petition, and therefore the petition could not move forward.

Phosphoric acid annotation change. Phosphoric acid poses health and environmental hazards, it's not necessary and is incompatible with organic practices. The additional use should be denied.

Tall oil petition. The petition is for the use of distilled tall oil as a so-called inert ingredient in organic crop and livestock production. Currently the NOP has failed to act
on the NOSB recommendations that would provide a framework for addressing inerts. Therefore, the NOSB has no criteria to act on this petition, and the petition cannot move forward. Thank you so much.

CHAIR POWELL-PALM: I see we have Amy has her hand up.

MEMBER BRUCH: Okay. Morning. Thank you, Christie, for your oral comments just now, and then kind of the whole gamut of NOC and all your comments, so I really appreciate it. You mentioned consistency and clarity is very important, and I would agree with that, it's important across the whole community.

Abby mentioned that HSN, the highly soluble nitrogen practice standard is clear from NOC's point of view. So that was helped to hear that. The one thing I wanted to ask you on the annotation piece, I think that's a great addition to your comments, this living document about some of the work in progress on annotations that need
to be addressed. Is it possible to maybe work through a prioritization list on that? I think they're probably all important to do to tomorrow, but just so we can potentially balance, you know, those needs, in addition to the other work agenda items, I think it would be helpful to maybe get a priority list.

MS. BADGER: Amy, thanks for asking. And I think that if that is something that you guys think would be helpful, we could certainly do that. I think we intentionally didn't do anything like that, thinking that, there might be areas of interest. You know, somebody on the board might say oh, I'm interested in this one. Hey, how about we address this one next meeting?

But we can certainly, you know, easily do something like that. And then you guys can look at them and skip over as you see fit or whatnot. But thanks for asking about that, and we just thought that it could be helpful. Every time we review sunset materials we, a lot, suggest, and
others do as well, oh, an annotation change would be helpful here or -- and then they don't get me because they're outside of the sunset process.

So we were just trying to kind of put forth another one of those low-hanging fruit items, because there are a lot of heavy lifts that you guys work on, but this one is, would be a little bit lighter lift, maybe.

MEMBER BRUCH: Thank you. Appreciate that, Christie.

MS. TUCKER: Is everybody else frozen, or am I?

MEMBER BRUCH: Oh, I can hear you.

MS. TUCKER: Okay. It looks like Nate's frozen. I'm not sure.

MS. ARSENAULT: He just did text and say everything froze --

MEMBER BRUCH: Yes, it is frozen. Did you get back, Nate?

CHAIR POWELL-PALM: My apologies.

I'm back.
MEMBER BRUCH: Okay, great.

CHAIR POWELL-PALM: Any other questions for Christie? Thank you, Amy.

All right. Thank you so much, Christie, for all of your work.

MS. BADGER: Thank you.

CHAIR POWELL-PALM: And for always packing so much into your comments, and I really appreciate it. No time wasted.

Next up we've got Russ Hauser, followed by Amalie Lipstreu, and then Julia Barton. Russ, the floor is yours.

MR. HAUSER: Yes. Thank you very much for the opportunity to comment. I'm Russ Hauser, a professor at Harvard Chan School of Public Health and Harvard Medical School.

Today I'm speaking as part of Project TENDR. It's a collaboration of scientists, health professionals, and advocates concerned with toxic chemicals that can harm children's brain development. I spent over two decades researching
the human health impacts of a class of industrial chemicals called phthalates, which are widely used in food processing and packaging.

Last year, several of us in Project TENDR published an article in the American Journal of Public Health, identifying phthalates as neurotoxic chemicals that can do lasting harm to child brain development and increase children's risk for learning, attention and behavior disorders. In particular prenatal exposure to phthalates are associated with attention problems in children.

In the last 2 years, since we reviewed the evidence, more than 30 new human studies have been published, fighting an association between phthalates and problems with children's cognition, attention and behavior. Phthalates have also been long known to harm reproductive organs in boys, specifically reproductive tract development.

Women, children and men are exposed to multiples phthalates every day. Black and Latina
women of reproductive age have higher exposure to phthalates as compared to white women, regardless of income level. And we know that phthalates readily transfer from the mother to the fetus.

While regulatory action has eliminated or reduced some phthalates from children's toys and cosmetics, diet remains a primary source of exposure. Phthalates have been shown to leach into food from plastic equipment such as tubing, lid gaskets, food preparation gloves, conveyor belts, bottle caps and packaging materials. Phthalates leach into organic food just as they leach into non-organic food.

For example, the organic food company Annie's Homegrown has determined that Phthalates detected in their macaroni and cheese products are coming from processing equipment and packaging materials. These harmful chemicals should not be permitted in any food production and packaging materials.

Moreover, the organic label
appropriately holds organic food production and packaging to a higher standard. Consumers expect organic food to be free of introduced toxic chemicals. Because phthalates leach from food contact materials into food and people are widely exposed to multiple phthalates, with higher exposures to women of color, and rapidly accumulating evidence finds levels of phthalates can do lasting harm to children's brain, we request the NOSB to prohibit phthalates from use in food production and packaging, to prevent the inevitable introduction of synthetic harmful chemicals into organic food.

I thank you for considering this request, and happy to answer any questions you may have.

CHAIR POWELL-PALM: Thank you very much for your comments. Any questions? Amy --

MEMBER BRUCH: Russ, thank you so much for being here today and your written and oral comments, and the collaborative effort of the
comments that you had. I just have a question. You mentioned the importance of food packaging and food contact materials to look at the elimination of these products. Do we need to cast a wider net and also look at some of the non-food products in the organic community as well? Just because I believe the $62 billion industry that our organic community represents is food and non-food, you kind of mentioned the packaging equipment, but I mean I'm even seeing on, you know, some shampoos and things like that, that have potentially some of these chemicals involved in those.

MR. HAUSER: Yes. So, so phthalates are found in many different products. I mean, you're referring to personal care products. I mean, they're founded in soaps and shampoos and perfumes, deodorants, et cetera. So that's another source of exposure.

For some of the phthalates though food is a primary source of exposure, specifically one
of the phthalates called DEHP, di(2-ethylhexyl) phthalate, which is used as a plasticizer to soften vinyl, plastic, or PVC plastic, and it leached out of that plastic, so if it's in contact with foods or grain, cetera. The vinyl plastic is about 30 percent by weight phthalates and it's not covalently down, which means it's not a chemical bond, so will leach out into products.

I don't know if that's specifically what you were getting at or -- with this, you know.

MEMBER BRUCH: Yes, that was helpful.

MR. HAUSER: Phthalates are in probably thousands of different products, but for some of them, especially DEHP, we clearly know that food is a primary source for human exposure.

MEMBER BRUCH: Okay. Thank you.

CHAIR POWELL-PALM: Thank you for that question, Amy.

Javier?

MEMBER ZAMORA: Thank you. Yes, I guess I'm not, I thought I was mute.
Russ, thank you so much for your comments. You partially answered that question when you were answering to Amy. But I wanted to -- first of, I'm a farmer, I'm not a scientist, and we rely heavily sometimes on scientists to tell us what's going on and how sometimes organic food, when it's packaged, gets changed into non-organic.

You said several things in how minority communities are involved, are impacted by these leaching chemicals in our food. Can you give me -- I know you gave some examples to shampoos and that sort of thing. I can tell you that, in my head I was thinking of when you get a bottle of water and you keep it under the sun, when we're out on the field, and then you drink later out of it and it tastes different. So there must be, you know, some sort of leaching there. So I just wanted to hear a little more on how communities of color and perhaps lower-income communities are impacted in a heavier way? Thank you.

MR. HAUSER: Sure. Sure. Thanks for
the question. So communities of color and low-income do have higher exposure, and a lot of this data comes from something called NHANES, the National Health and Nutrition Examination survey, NHANES. That is a survey that the CDC does, and they measure concentrations of chemicals and metals in several thousand U.S. citizens each year, and it clearly shows higher levels of phthalates as well as other chemicals and metals.

And the sources of these are probably multifold, they're probably coming from, you know, foods and food packaging and the different types of foods that are available to these communities, also coming from, you know, different products that they may use in terms of personal care products as well. And then of course, there's, you know, other sources, from pollution and other sources as well. But the NHANES data, you know, clearly shows differences, and especially for some of the phthalates among these communities having higher levels in their body.
MEMBER ZAMORA: Thank you. And I just wanted to mention something, maybe it's a little typo for people that are doing the writing on the screen, when he talks about phthalates on this, it's saying solid. So I think we probably need to fix this because it's a big difference there.


CHAIR POWELL-PALM: You can get close-captioning, yes.

MR. HAUSER: Yes.

CHAIR POWELL-PALM: Thank you, Javier for that question.

Rick? Oh, and you're on mute, Rick.

MEMBER GREENWOOD: Follow up on actually what Javier brought up. So I'm curious though, have there been some real epidemiological studies on phthalates and the racial disparities?

I know there's the NHANES study, but has it been more closely examined just for the phthalates to see where people are getting them by racial
differences? You know, is it food habits, is it industrial or is it where individuals live? I mean, do you have, have you looked more closely at that?

MR. HAUSER: Yes. There are studies that have -- Rick, thanks for that question, that have looked at differences or explanations for the differences. There's work that Ami Zota has done, Z-O-T-A, and she's focused a lot on, you know, racial, ethnic differences, income differences in terms of exposures.

And the three things you mentioned are really explaining it, which includes the, you know, foods in terms of, you know, consuming more foods that are packaged or processed in certain ways, the personal care products, and then also where they live, where their communities are in terms of if they're, you know, close to industrial sites or pollution.

So there are studies in the peer reviewed literature that do identify these
different sources. Some have focused more on food
than others. Others have focused more on the
personal care products that have been used.

MEMBER GREENWOOD: Okay. So, again,
focusing more closely than on the phthalates in
pollution, is that an air quality issue or are you
saying it becomes a water issue, in municipal
waters? What's the explanation for that?

MR. HAUSER: Yes. So phthalates, as
compared to other chemicals, I think primary routes
and sources of exposure are really more from the
products that we come in contact with in the food,
less so from air and water, even though the
phthalates do end up in air and water, but the
contribution to human exposure from those is
considered low as compared to, you know, other
pollutants, such as from water. Phthalates, I
would say, I would classify them more as, you know,
exposure from consumer products and foods as a
primary -- yes.

MEMBER GREENWOOD: Okay. Yes, it's
interesting. I used to run an analytical chemistry lab, and you couldn't get water without phthalates. I mean --

MR. HAUSER: Oh, yes, yes.
MEMBER GREENWOOD: It's almost impossible. So I know they're widespread, but I was just curious about these.

MR. HAUSER: Yes. I mean, that's interesting because I first got into this research in early 2000, working with some scientist at the CBC, and we were actually looking at measuring different classes of chemicals, and they kept having traces of contaminant in the water and the reagents in the lab just because they're so ubiquitous.

So what you, you know, just pointed out is still true today and really led to kind of a lot of the interest in research in phthalates because they're so widespread and ubiquitous, in our environment and also in people.

MEMBER GREENWOOD: Okay. Thank you.
MR. HAUSER: Sure.

CHAIR POWELL-PALM: Brian?

MEMBER CALDWELL: Yes. Thanks, Russ, for bringing up this issue. I really hope we can address it, but I had a quick follow-up to Javier's question. I have always wondered what it was the favors (phonetic) that you get from water. And it seems like they're, you know, definitely in the, you know, parts per million or higher range because we can taste them pretty clearly.

MR. HAUSER: So, you were asking the question about, Javier was asking about, you know, bottled water when it's in heat and sunlight.

MEMBER CALDWELL: Yes, yes.

MR. HAUSER: Yes.

MEMBER CALDWELL: Exactly.

MR. HAUSER: Yes, so probably more than you want to know, or, you know, it's as -- I'm a physician that actually got into research looking at human health effects, but quickly learned that there was a lot to learn in terms of polymer
chemistry. So, a lot will depend on the type of plastic that the water is in, in terms of what chemicals may leach out from the plastic into the beverage or the water that you're drinking.

If you're referring to those, you know, the typical bottles that you buy in convenience stores, et cetera, grocery stores, those are actually made from a different material that does not contain what we call ortho-phthalates, but it is a different type of plastic, it's a polyethylene terephthalate, it's not an ortho-phthalates sorry for a lot of the organic chemistry. But it's a different type of plastic and it contains both, you know, antioxidants, it's also contains antimony, which is a metal.

And there's been studies that have been done. I'd worked with actually a group in Cyprus where, you know, they have extremely hot summers and strong solar amounts, you know, and we were able to measure in these plastic bottles higher levels of chemicals, including Bisphenol A
specifically. But the bottles you're probably referring to, if you look on the bottom of the bottle, you'll see that it says PET, you know, where the recycling label is, that's polyethylene terephthalate. Even though it has the word phthalate in it, it's not the ortho-phthalate that I'm referring to when we talk about the harmful effects to children's brain development. But there are many other chemicals in those bottles. And the heat and the sunlight will increase leaching of the chemicals into the water or fluid that's in the bottle. Does that answer, Brian, what you were kind of getting at in Javier --

MEMBER CALDWELL: Yes, thanks a lot. We might consider here, yes.

MR. HAUSER: Yes. It becomes --

CHAIR POWELL-PALM: We're going to have

MR. HAUSER: -- very quickly.

CHAIR POWELL-PALM: We're going to have to keep going. But if we have additional
resources, Dr. Hauser's contact information is available to members who can reach out directly.

All right. Moving on. Amalie Lipstreu, followed by Julia Barton, and then Astrid Jacobs de Padua.

MS. LIPSTREU: Thank you, Nate. Good afternoon, members of the National Organic Standards Board. I'm Amalie Lipstreu, policy director at the Ohio Ecological Food and Farm Association. I really want to thank you as a board for taking leadership on the role of organic agriculture in addressing climate change and food systems resilience.

It's heartening that increasingly among the scientists' organizations and conservation professionals I have the privilege of working with, they increasingly speak of the need to use systems thinking in addressing the problem of climate change. Despite the growing prevalence of the term regenerative agriculture, we know that it offers no uniform standards, no
governing body and no oversight.

Organic agriculture, as we all know, is the only system of agriculture offering that, plus the synergistic suites of practices that make this voluntary system of agriculture a key solution for the climate crisis.

Unfortunately, as we have seen, the U.S. Department of Agriculture is reticent to say anything that might confer benefits to organic systems. Your letter to the secretary was both well-timed and sorely needed. Unfortunately, the response from the director is to add this item to her work agenda, along with a number of heady questions to answer. As stated in OEFFA's written comments, this could be the sole item on the board's agenda for years and still leave room for more discussion and research. We're happy to see you take on this subject and at the same time make your concerns known to USDA leadership, that this is the work of the department as a whole and should not rest on the shoulders of a part time volunteer.
Please know that we will do everything we can to ensure you have access to the farmers, researchers and resources you need to do this work, and also encourage you to continue asking USDA to commit staff and resources to this effort as well. And importantly, break the code of silence around the numerous co-benefits of organic agriculture. Also, as we promote the role of organic agriculture, providing solutions to the climate crisis, we need to caution that hydroponic systems are dependent on the highly soluble nitrogen fertilizers and not the kind of systems approach supportive of climate change solutions.

And finally, we do support the proposal from the board to limit highly soluble nitrogen fertilizers with carbon-to-nitrogen ratios of three-to-one or less, including those individual components of blended fertilizer formulations. And our certification colleagues have reviewed the language and feel comfortable with monitoring and
enforcing those provisions. Thank you for your time.

CHAIR POWELL-PALM: Thank you for your comments. Any questions for Amalie? All right, seeing none we'll keep going. Thank you, Amalie.

Julia Barton is up next. Astrid Jacobs de Padua, if you are here, if you are here, would you make yourself known please just put something in the chat box. We're not seeing you. And then Harold Austin after that.

So, Julia, the floor is yours.

MS. BARTON: Thank you, Nate. Hi, everybody. Welcome new board members. It's nice to meet you virtually. I am Julia Barton with the Ohio Ecological Food and Farm Association. I'd like to highlight a few comments, a few topics from our written comments today. First, hydroponic and container systems, OFFEA is part of a group of certification, education and policy organizations who agree that soil is the foundation of organic agriculture and who strive to achieve consistency
in our organizational policies related to certificate and certification decisions. Because aeroponic hydroponic and crops grown to maturity in containers do not comply with OFFEA and because there is significant inconsistency in the way these forms of production are being handled by organic certifiers presently, we urge the board to call for a moratorium on the certification of these operations until we can utilize our existing NOSB and rulemaking process to move forward with greater consistency.

The timing and format of meetings. We need more farmer participation in the NOSB process. To this end, OFFEA's grain grower chapter has continually requested an alternative to the current meeting schedule. Most recently, they have proposed moving the schedule back 2 weeks each meeting. This would mean the meeting would rotate throughout the year, equally benefiting and inconveniencing various stakeholders over time. We believe farmer participation is also
a priority of the board. And we're wondering how
we can work together to ensure that the meetings
are scheduled to maximize input from a variety of
organic production systems and producers across
the country.

Racial equity. OFFEA appreciates the
work of the current administration to bring equity
issues to the fore within USDA, and the efforts
of our colleagues at NOC and others to bring these
issues to light within the organic community. We
support NOC's racial equity comments and have the
following two specific requests.

We request the board establish a
diversity, equity and inclusion subcommittee
within the NOSB. We also request the board add
fairness standards to the NOSB work agenda or work
through the process to add them to the work agenda
and then work to develop them.

Finally, highly soluble nitrogen
fertilizers. Organic agriculture is a systems
approach which is intended to feed the soil not
the crop. OFFEA appreciates the board's thorough work on this topic and supports the addition of this motion to 205-105. Our certification department anticipates being able to manage this restriction much as they did with sodium nitrate in the past. They feel confident that we as a community, farmers and certifiers can work this out. You'll be hearing from several OFFEA farmers directly on Thursday. Thank you again for your time and for your service.

CHAIR POWELL-PALM: Thank you for your comment, Julia.

Logan has a question.

MEMBER PETREY: Hi, thank you, Julia.

So, there are some farmers on the board and we all agree that sometimes April and October are very tough, you know, to make it. So, just curious, when you said the 2 weeks prior, are you meaning each year 2 weeks prior again, is that what you're implying to make it different.

MS. BARTON: Yes, ma'am. That was one
suggestion by the Grain Growers Chapter. I think
that was Eli, Dean, maybe a meeting or two ago.
But it was just one idea.

MEMBER PETREY: Yes.

MS. BARTON: They've proposed several
ideas over time, because we feel strongly that it's
not really fair to just ask the farmers to multitask
while they're doing everything else that they're
doing in the spring. And we also recognized that
different growers have different busy times of the
year. So, it would be fair if we rotated the
meeting, so kind of like Ramadan or, you know,
various other lunar calendar holidays, it would
move throughout the year.

MEMBER PETREY: Sure. I mean, yes, it
is tough. These times of year are our busiest
times here in the southeast. I know it is in other
places. But it was an interesting concept. I
appreciate it. Thank you.

MS. BARTON: Yes, ma'am. Thank you.

CHAIR POWELL-PALM: Thank you, Logan.
MEMBER BRUCH: Thank you, Nate. Julia, thank you. I appreciate all of this comments, the written ones and the near-recurrent oral comments as well. Hopeful to hear that the practice standard for HSN is clear from your certifying perspective. Had a question, it was geared towards your written comments on one of the CACS' work agenda items. OFFEA, I know, is currently capturing acres by products on certificates. And there was some comments just in general from the community that, you know, that particular question it can work very easily for grain farmers. I know your written comments, you mentioned how potentially that could be handled for livestock. I was wondering if you had any best practices on how you guys are doing acre collection by crop for small acres and mixed vegetables?

MS. BARTON: Sure, that's a good question. We did have that conversation internally. And I'm not sure if we spelled it out
in our written comments. So, if it's very small acreages of mixed vegetables, we generally list it as mixed vegetables on the certificate. If someone has a contract with a grocery store, chain or a large grocer where the grocer is requiring for, or any buyer is requiring, for instance, that those products are listed individually, then we're happy to do that as well.

If anybody's got large quantities of a certain crop, we definitely want to make sure that we do that. But if we've got an, you know, let's just say an acre, 3 acres or less of mixed vegetables, we generally list it as mixed vegetables. But if we have questions from buyers, we're happy to provide additional documentation in support to the grower, certainly.

MEMBER BRUCH: Okay. Wonderful. Thank you, Julia, appreciate it.

MS. BARTON: Yes, ma'am. Thank you.

CHAIR POWELL-PALM: Thank you for that question, Amy. Javier?
MEMBER ZAMORA: Julia, thank you so much for taking the time, and your comments. As a founder, I feel that we get really good support from organizations like yourself, that I frankly believe that the NOSB does need to pay a little closer attention to the farmers' needs, especially the working farmers that, I can tell you about myself, speaking about myself, how difficult it is to really feel like you're being given the best you can to support the decisions that have been -- that are on the table to be decided on.

And when you have a working farm, you work 24/7, this includes Sundays. I think I can tell you that on only Sunday after 5 p.m. it's my day off. So, when all these needs that the board requires you to go through different sources of research and different readings, not to mention the time away from the farm, it's very difficult for a working farm.

If you're a retiree, you're okay, you need something to do. But when you are depending
on, you know, 50, 60 people are depending on what you do, on a working farm that is family-owned, it --

CHAIR POWELL-PALM: Thank you for that, Javier. It blacked out there for a second. Is that where you finished?

MEMBER ZAMORA: Yes, that's fine.

CHAIR POWELL-PALM: Sorry about that. Yes. Okay. Thank you, Julia. I will just give a shout out to the OFFEA Grain Growers Chapter that despite it being inconvenient, you all still participate, which I'm very grateful for. I myself was farming in a blizzard right before we got on here, and it is never convenient, crops need to get in, but I appreciate everyone who still shows up. All right. Thank you, Julia.

Astrid, I don't think we were able to locate you. Please send a shout on e-mail if you are on, and we'll try to fit you in. Next up will be Harold Austin; followed by David Epstein, if you're on, I think David we weren't able to locate
either; followed by Jaydee Hanson.

So, Harold, the floor is yours.

MR. AUSTIN:  All right.  Thanks, Nate.

Good morning, everybody.  My name is Harold Austin -- or good afternoon, I guess, depending on where you're located.  My name is Harold Austin.

I serve as the chair of the Science Advisory Committee for the Northwest Horticultural Council, as well as their organic subcommittee.  I'm the director of orchard administration for Zirkle Fruit Company, located here in Selah, Washington.

CHAIR POWELL-PALM:  I apologize, Harold.  Michelle, it seems like the timer didn't start.

MR. AUSTIN:  I'm okay with that.

CHAIR POWELL-PALM:  Yes, I know.  I was going to say that.

MS. ARSENAULT:  I usually start it after name and affiliation.  He's still going with that affiliation.

CHAIR POWELL-PALM:  Oh, okay, okay,
sorry, sorry. Go ahead. I apologize.

MR. AUSTIN: Okay. My comments of support are on behalf of the organic crop producers and handlers here in the Pacific Northwest and across the country. I wish to begin by thanking all of you serving on the NOSB for taking the time to take and share in the duties of this tremendous responsibility. Thank you, each of you.

For handling, I support the relisting of nitrogen and carbon dioxide. Both of these are used in our controlled atmosphere storage of our organic apples, to slow down fruit respiration. We would not be able to compete with conventional apples, which have a plethora of materials to use in later marketing timeframes without the use of these two materials, they are crucial in our packing and storage of operations of our organic apples.

For crops, please see the two documents that I submitted which provide detailed description in support of several materials, some
of which are micronutrients, sticky traps, coppers, humic acids, polyoxin D zinc salt and several others, all of which we currently use in our organic farming operations.

For the CACS, the discussion document on the NOSB Technical Support Initiative, while I wholeheartedly support the concept of providing additional assistance to the NOSB members, I'm 100 percent against outsourcing this assistance to any university or nonprofit personnel. Both of these scenarios involve entities that do not fall under the same federal oversight and scrutiny as the AMS or the NOP.

Both also potentially could fall prey to outside influences that potentially further erode stakeholder trust in the NOSB process. By building technical supports from within the staff of the NOP or the USDA, you were building for their future. And by that I mean selecting a selected staff personnel for maybe a couple people to serve on the various subcommittees, begin to build
historic knowledge around each of the materials that extend the decision-making process involving those materials. This then becomes an unbelievable source of information of facts, discussions, issues related around each of these materials. While the NOSB members eventually will sense that off themselves, hopefully the staff will remain, that's providing a critical and valuable resource for the future NOSB members that follow in their place.

When I served on the NOSB, we had a tremendous resource in Emily Brown Rosen, she was absolutely amazing. Her historic knowledge of the materials, the discussions around each material was absolutely phenomenal and gave us information that we couldn't find otherwise. Please build for the future and realize that the decisions that you are involved in making impact organic growers, packers, producers, their ability to compete, let alone to stay in business.

As far as allocations, I urge caution
to not be overly prescriptive or restrictive on
the various materials that you're going to be
voting on. God bless, and have a safe and
wonderful spring meeting.

CHAIR POWELL-PALM: Thank you so much,
Harold.

Brian has his hand up.

MEMBER CALDWELL: Yes, thanks, Harold.

I think we're really going to struggle with this
issue of kind of who's kind of eligible to be
advising or and doing technical assistance to the
NOSB. But you mentioned Emily Brown Rosen and Zea
Sonnabend as fantastic resources, but they would
be unavailable if we had to rely on USDA or
university staff. And so, they're still around,
they still know just is much as they did before,
but we wouldn't be able to use people like them.
And so, I'm just wondering if you feel like the
sort of pool could be expanded a little bit.

MR. AUSTIN: You know, Brian, yes, I
wouldn't be against that. I guess, I would just
urge caution on what that pool would look like. I think one of the reasons I stay within the process whether it's USDA, NOP, AMS, is that your billing staff resource that then can be utilized for individuals following in your footsteps at a later date and time. Emily at the time, she was employed as a staff member of the NOP. So, I mean, so I mean, that's why I fall into that, but I'm critical of going too far outside the scope of control within AMS, NOP itself, just because then there's other outside influences that become a factor within that.

One of the things that I didn't mention in my oral comments, that I mentioned on written was there's also the use of working groups, like we had the tree fruit working group when we were dealing with the antibiotics. I don't think that the NSOB is utilizing that process or being allowed to utilize that process anywhere near as much as you should be able to. I think that's a valuable resource that you guys really need to take and have
a talk with the NOP and see about how do you implement that on the various subcommittees and utilize that as another tool and resource, its value.

MEMBER CALDWELL: Thanks, Harold.

CHAIR POWELL-PALM: Thank you for that question, Brian. Rick?

MEMBER GREENWOOD: Yes. Thanks, Harold. And I completely agree with you. I think when I joined the NOSB, about, you know, almost 5 years now. The ability to have NOP staff give you the historical context for the decisions that were made, I think was invaluable. And I think that's something, especially for new board members, where you really can rely on people that don't have a vested interest in the outcome. So, I agree with you. Thanks.

MR. AUSTIN: And Rick, one of the things, circling back around a little bit to Brian's would be, if you wanted to expand the pool from which you could draw those resources from,
maybe it's a pool that's made up of past NOSB members. That might be another option that could help provide some of that information and some of those resources for you.

MEMBER GREENWOOD: No, thanks.

CHAIR POWELL-PALM: Thank you for that, Harold. It's a big topic. I think it's going to be very impactful for all of us. So, thank you for your insights.

I don't think we're seeing David Epstein, we're going to move on to Jaydee Hanson, and then followed by Harriet Behar before we break.

So, Jay, you on.

MS. ARSENAULT: On the call, let's see if he's having trouble. Oh, there you are. Jaydee, we can't hear you. Although you don't have a red X through your microphone. No, not now.

CHAIR POWELL-PALM: No. Still no volume, nope.

MR. HANSON: Can you hear me now?

CHAIR POWELL-PALM: There we go.
MR. HANSON: Okay. It must be my headset. Technology does not always help us. Even though it's -- so I'm using half the technology I had.

I'm Jaydee Hanson, I'm the policy director at the Centre for Food Safety. We are a longtime supporter of Organic Program. Wanted to comment quickly on two things. One, we very much would like the National Organic Program to finalize as regulations, it's the excluded methods language that the NOSB has been going through for the last -- well, since 2016. We think basically with the addition of language in vitro nucleic acid technologies, replacing recombinant DNA technology, that would set up a situation where the new methods that came in would be weighed against the -- standard is, you know, was it derived from techniques of in vitro nucleic acid technologies and that would help with the immediate discussions around cell fusion and protoplast fusion, but also gene editing and other process
We do think that it's time that this be part of the regulations related to OFFEA, not just guidance documents, not just advice to certifiers. On biobased mulch, we are concerned about the increased use of nanochemicals in biobased polymers, we support biobased polymers but we think that as the NOSB looks at them, they need to make sure that nano cellulose, nano clays and other nano ingredients in plastics be assessed and not migrate out of the plastics into the soil or out of the plastics into foods.

So, we are also very concerned about workers breathing nano clay and nano cellulose as they work with these products. And you have way more in our discussions. And finally, for the last several meetings we've urged the NOSB (audio interference.)

CHAIR POWELL-PALM: All right. So much for your comments, Jaydee. Any questions from our members? Seeing none, we're going to move
on to Harriet Behar, and then we're going to take a break. Following the break we'll have Beth Rota, Lee Frankel and then Jake Evans. Harriet? Oh, yes.

MR. EPSTEIN: This is Dave Epstein. I apologize sincerely, I had it on my schedule for noon.

CHAIR POWELL-PALM: All good.

MR. EPSTEIN: I was just involved with an interview for a candidate we're hiring in Washington State and someone called me and said you folks were calling my name. So, I'm really sorry I'm late. But if there's an opportunity, I'm here, I can present.

CHAIR POWELL-PALM: Yes, we'll work with the NOP team to fit you in. So, please stand by.

MR. EPSTEIN: Yes, thank you.

CHAIR POWELL-PALM: Harriet, all yours.

MS. BEHAR: Hi, my name is Harriet
Behar, organic farmer, environmental advocate and former NOSB member. The NOSB spends much of its time discussing inputs for use in organic production, and many people understand organic agriculture only through the lens of what inputs are or what are not allowed to be used on crops and as ingredients.

Let us not forget that organic is a system of agriculture, and it is that system of cultural, biological and mechanical practices that promotes ecological balance, recycles nutrients and enhances biodiversity. It is the systems-based approach of organic that provides the numerous environmental, economic and human health benefits when compared to non-organic.

The allowance of highly soluble nitrogen without restriction would start organic down the path of reliance on inputs rather than systems, resulting in dubious benefits and negative consequences.

As a longtime organic farmer and
inspector, I believe the tools for implementing
the proposal as written are readily available with
much of the information already provided in the
proposal. Only fertility inputs that are close
to the three-to-one carbon ratio would need to be
scrutinized during the annual certification
review. And there is abundant information
available to aid growers and certifiers in
determining the annual nitrogen needs of just about
every crop grown.

I have done many inspections where I
needed to review the sodium nitrate used and its
provision for 20 percent of the nitrogen needs of
the crop. While it can be cumbersome, it is not
impossible. Many inspectors have developed
spreadsheets to do the calculations, speeding up
review, especially when there are numerous crops.

Just as manufacture in the past of chicken manure
pellets quickly learned to supply information to
their organic clients on the heat treatment used
for their products to be applied on crops for human
consumption without a wait time.

The limited amount of fertility suppliers who would be affected by this rule would need to supply the C-to-N ratio to organic operators and certifiers. In short order, these suppliers will quickly learn this organic requirement and the info will be readily available.

All inputs must be reviewed within the context of the long- and short-term effects on ecological systems and the OFPA. I would have preferred that the annotation would have limited use only in response to an out-of-the-ordinary climactic occurrence that cause the organic system to fail, such as unusual cold, extreme wet or dry conditions.

With climate change, growers are challenged and this proposal allows for a tool to deal with extreme conditions. This is the main reason I support the proposal, rather than a complete ban. And please refer to my written comments on numerous other topics.
CHAIR POWELL-PALM: Thank you so much, Harriet, for your work, for your participation, we appreciate it. Any questions for Harriet, from the board?

All right. I'm going to be a terrible person real quick and delay our break just a minute. And David, if you would give your comments, please, and then we will break.

MR. EPSTEIN: Well, I'm truly sorry for delaying everybody's break.

CHAIR POWELL-PALM: No worries.

MR. EPSTEIN: But I appreciate your accommodation. So, good afternoon. I call your attention to the written comments we submitted regarding the materials and proposals currently under consideration by the board. The Pacific Northwest is the leader in the production of organic apples, pears and cherries, producing 95 percent of all the fresh organic apples in the U.S.

The NHC supports the relisting of sticky traps and fixed coppers for disease management.
Routine biological monitoring of pest insects, allows the grower to know what pests are present, when their present and at what population levels and is the foundation of organic pest management. Pest management tools should only be deployed once monitoring knowledge is in hand, to determine whether a decision is warranted and needed and to best time the use of that management tool or tactic.

Use of sticky traps is the principal method for establishing when key pests become active in orchard and for initiating biological models that predict egg laying, and when larval emergence occurs, the best time control actions. Without these tools, growers are making uninformed decisions on whether and when they initiate a control. There are no viable options currently to replace the use of sticky traps.

The use of coppers is critically important in organic apple and pear production for the prevention of fire blight, especially since
the loss of antibiotics streptomycin and oxytet.

Copper is used for fire blight management only when fire blight models predict an upcoming fire blight weather event. Coppers are not routinely used every year.

And this disease can devastate an orchard. In 2017, 22 percent of apple acres and 65 percent of pear acres in Washington had fire blight infections, resulting in $9 million in loss and hundreds of acres of apples and pears being removed. Using this important tool for fire blight management can result in even more catastrophic losses in a weather-conducive year.

The decision to delist would leave growers with little to protect their trees. This is because fixed copper products average 70 percent efficacy when used alone, compared with many other organic alternatives, such as Bacillus subtilis and essential oils, which range from 20 to 40 percent efficacy.

We agree that these materials must be
used in a manner that minimizes the accumulation in the soil and water and decreases harmful effects to soil and water biota. However, the monitoring and forecasting systems routinely deploy a low percentage of copper blight an even frequency of copper applications reduces the risk of copper buildup in soil and water. Thank you for your time and appreciate being allowed to make those comments.

CHAIR POWELL-PALM: Thank you for your comments. We really appreciate it.

MR. EPSTEIN: You're welcome.

CHAIR POWELL-PALM: Any questions from the board? All right. Thank you very much for your time and comments. Okay. We're going to break for 15 minutes, so let's come back at 55 after the hour.

So, Beth Rota will be first after the break at 55 after the hour, followed by Lee Frankel and then Jake Evans. All right. See you all in 15 minutes.
(Whereupon, the above-entitled matter went off the record at 1:39 p.m. and resumed at 1:55 p.m.)

CHAIR POWELL-PALM: Welcome back, everybody. Hope you were able to enjoy some organic snacks. If we're good to start, Beth Rota, you are first up.

MS. ROTA: Thanks, Nate. I couldn't figure out how to start my video. But there we go. Good afternoon. My name is Beth Rota, and I am the organic program director at Quality Certification Services. Welcome to the new board members. I hope that we can all meet in person soon. Thank you for taking the time to consider my previous written comments on oversight improvements to deter fraud. Continued trust in the organic seal is very important to QCS as it's avenues to all of us, I am sure.

However, I disagree with the assertion that trust comes from transparency in supply chain. I think stakeholders trust the organic seal
because the certification process is robust, not because supply chains are transparent. As OFPA and the organic regulations don't allow certifiers to disclose confidential business information, we do not support the listing of crop acreage on the certificate or the public OIT (phonetic).

I have read the discussion document. I have to wonder if there's lack of confidence in certifier oversight. If so, let's work together and fill in the gaps with a targeted approach. It's important for you to know that one of the most common non-compliances we issue is for insufficient records. In my experience certifiers are adequately addressing gaps in records. I also trust the NOP to identify certifier deficiencies through the accreditation process.

However, sophisticated record-keeping systems, while appearing compliant, can be designed to cover up intentional fraud. This is one of the reasons why a universal bill of lading
would not effectively prevent fraud. Most operations do not sell their entire crop to only one buyer, thus limiting the buyer's knowledge of total sales. The proposed crop-specific details would also not be applicable beyond the farm sale in lengthy supply chains with mixed lots or for processed products.

Fortunately, certifiers have access to an operation's entire production and sales records. Certifiers also have skills and tools to look for potential fraud, free of competing interests that may exist between organic operations. We conduct mass balance audits at every annual inspection to determine if products harvested are handled balanced with product soles. And we also conduct yield analysis to make sure crop operations are not selling more than they could reasonably produce.

Additional resources from the USDA such as organic-specific yield data by crop and region would help us scrutinize reported yields for
potential issues. Certifiers also cross-check purchasing sales records between operations to make sure they're not selling more than they disclose to their certifier. The NOP could help certifiers target risky transactions and provide support and coordination for cross-checks, especially when multiple certifiers are involved in the supply chain.

In summary, I hope we put more resources toward yield analysis and cross-checks for risky products and supply chains, thus avoiding overly prescriptive record-keeping requirements and disclosure of confidential business information.

Certifiers are committed to a robust oversight of fraud prevention, and should have a seat at the table on any projects aiming towards improvement.

CHAIR POWELL-PALM: Thank you for your comments, Beth. Any questions from the Board? Seeing none, I have one. Beth, could you speak a little to what all avenues or routes certifiers have to flag fraud? Where is the greatest
collection of possible fraud tips coming into certifiers? We as inspectors only have, you know, that 4-hour snapshot that we can see on site. But there's all these transactions, all these other opportunities to identify fraud. Where do you see, as a certifier, the best spot to catch fraud, and to get those tips to investigate further?

MS. ROTA: That's a really great question, Nate. Sometimes it comes from complaints. A lot of it comes from -- if we're doing 5 percent of our operations we're doing residue testing on. And that's a really good place to look for potentials of fraud. At the farm level, like I said in my comments, I really think doing a yield analysis, that's especially useful where we have a farm that is producing a large volume of any one crop.

And we do this for a lot of operations that have a big volume of any one particular crop. But, yes, there's a lot of different ways to look for it. You know, sometimes it's just looking at
record-keeping systems that have inconsistencies. But I think that having more regular cross-checks is going to help us identify that as well as really taking a risk-based approach.

And I anticipate some of this is going to happen with the implementation of SOE as that we're going to be doing a little more risk assessments of certified operations, and perhaps start doing more things like cross-checks as a regular activity instead of just in response to a complaint investigation.

CHAIR POWELL-PALM: Sure. Thank you. Amy has a question as well.

MEMBER BRUCH: Yes. Beth, thank you for your time today and your comments, both the written ones and your current oral ones. I have several questions, but I'm just going to limit it to one right now. You mentioned one of the real important things to evaluate is yield analysis. And I was just wondering how best with the information that currently is provided, how do you
verify the yields that are maybe communicated?

MS. ROTA: How do we verify the yields

--

MEMBER BRUCH: Yes.

MS. ROTA: -- is by looking at -- we can during an inspection or at any time really get records from the producer to determine how much was harvested, and then look at their field records to verify the acreage for that. There isn't a lot of data out there on what to expect an organic producer to have a yield for. We're just looking at general crop data to compare that. And we expect organic yields to not be higher than what we're seeing in yield reports from the USDA.

This isn't organic-specific. It's usually with the National Agricultural Statistics Service or other type of yield information. We're looking at state data, but we're comparing what we're seeing from the farm records with the data that's available, but organic-specific data would be really helpful.
MEMBER BRUCH: Thank you.

MS. ROTA: Does that answer the question?

MEMBER BRUCH: Yes, it does. Do you see value in bidirectional checks potentially? So you have farm records, and then you're looking downstream to then re-verify what farm records show?

MS. ROTA: Exactly, exactly. And that's what I was talking about with cross-checks is I think that we can do a yield analysis on the farm that we certify. But we want to really verify that records aren't being undisclosed, right? And we want to cross-check our farm or our handler's records with their buyers records as well. We do that a lot in our own certification activities when we certify multiple entities in the supply chain. It's really easy for us to identify that and do that on our own. Otherwise it takes a lot of coordination between certifiers and that's where I think resources from the NOP, some
coordination, some support could really help certifiers.

They could even be like, you know, the one who's carrying out the cross-check and certifiers provide the data from all over the entities that we certify. And then he could coordinate that process. I think that would go a really long way.

MEMBER BRUCH: Great. Thank you, Beth. Appreciate it.

CHAIR POWELL-PALM: Kim had a question as well.

MEMBER HUSEMAN: Hi Beth. And you might have already somewhat answered this question with your previous statement, but is cross-checking those yields a standard operating practice and SOP as certified within your organization?

MS. ROTA: Well --

MEMBER HUSEMAN: Or is it just ad hoc? And you notice there could be a potential issue?
MS. ROTA: Cross-checks and yields are two -- and yield analysis are two different activities. A yield analysis we've done on the farm. We typically do that on farms where we're looking at, unfortunately not a mass balance, for example, on a -- at a farm level. We would be looking at that entire production records for a particular crop, looking at the acreage for that crop, and then doing a yield analysis to say, okay, that's a reasonable amount of production, not just based on the acreage, but based on the, you know, how close the crops are planted, and, you know, the level of inputs that they're using, what type of organic system plan they have in place.

MEMBER HUSEMAN: And that standard, though, for -- yes, but that's -- is that standard for you? Or is that just in ad hoc situations?

MS. ROTA: We typically -- yes, that's part of our mass balance --

MEMBER HUSEMAN: Okay.

MS. ROTA: -- process at a farm.
Cross-checks aren't, because they're outside of just one individual operation, we typically do those as their -- you know, as part of investigations.

MEMBER HUSEMAN: Thank you.

CHAIR POWELL-PALM: Thank you for that question, Kim. Javier will be the last one for this one. And I would just remind everyone to keep it to questions. If we have comments or further discussion, please reach out directly to the commenter. So go ahead, Javier.

MEMBER ZAMORA: Yes. Thank you, Nate. That's a -- that's kind of like embraced my heart knowing how big organic is and how so much food is grown organically, but that there isn't data that it's more accurate of what the mass balance as you guys call it with just how much you're producing, doesn't the USDA provide those numbers for you or county on how, you know, let's say, how many trees per acre of strawberries an organic grower produce? Don't you have access to those
things?

And I think the record and the acreage, the way you guys are doing it is excellent that there is just -- there is no better way of cross-checking than that. But I believe -- I'd like to know if you know any -- how do you go and find sources? Or how do you guys do it find sources so that can educate you on what the production could be or should be or an average?

MS. ROTA: That's a really great question, Javier. Thank you for that. It's my understanding that the organics, this agricultural census has only been looking at organics for a short period of time. And I don't know how much they're collecting, specifically on yields. Where we're looking at yield data is mostly conventional agriculture. Most of the data that's available publicly is for conventional agriculture.

And so we have to extrapolate what we might expect from an organic farm. Based on conventional data, I think it would be really
helpful if there was more data that was specific
to what we can expect to see on an organic farm.

If we have a bunch of growers that are growing
the same type of thing, it's easy for us to keep
that data for ourselves. I'll give an example.

We -- offices in Latin America that produce a lot
of bananas.

And so internally we have some data on
what we would expect to see as boxes per week or
boxes over the course of a year for that. But that
data is less available for organic-specific
information. And I see in the comments, there's
a link to some surveys from NASS, the National Ag
Statistics Service, but more data and more specific
data would be really, really helpful.

CHAIR POWELL-PALM: All right. And I
lied, I will put one more question to you, Beth.

So as an inspector, if you're doing a mass balance,
would it not be super helpful for an immediate look
back to be able to see did the transaction you're
inspecting exceed the capacity of the farm that
supplied the inspected party, which the inspection is occurring?

So for example, if I'm inspecting a dairy, and I see they bought a thousand tons of hay, but the certificate which they provide me from the supplier only shows that that farm that they bought it from only has 10 acres certified, does that not provide this wealth of opportunity for inspectors to be citing red flags to -- in their inspection reports to the certifiers to just do a better job of data gathering risk?

MS. ROTA: The issue with that that I mentioned in my comments, Nate, is one, you're -- when you're doing an inspection, you would then be reporting on something from another operation, not the operation that you're inspecting. But, you know, really, it's not very frequent that -- you're just looking at one piece, one transaction, right? You're not looking at the entirety of that other farm's sales records. You have one purchase record from the farm that you're inspecting.
It's really rare that you're going to see that farm's entire sales in one transaction. And so it certainly could be useful. But I think that's where we need to have more certifier exchange of information and smart coordination between certifiers to be able to look at those records through cross-checks. And that should be part of the process that I think that would be really great for the NOP to invest resources and staff and personnel to coordinate that.

CHAIR POWELL-PALM: I think we'll look forward to following up with you on this, because there's a lot of good work to be done here. So thank you so much for your comments and fielding all of our questions. Really appreciate your time.

MS. ROTA: Absolutely. Happy to do so.

CHAIR POWELL-PALM: All right. Next up is going to be Lee Frankel, followed by Jake Evans and then Patty Lovera. Lee, if you're on,
the floor is yours.

MR. FRANKEL: Okay. Great. Good afternoon. My name is Lee Frankel. And I'm testifying today on behalf of the Coalition for Ecological Recovery in Organics. CERO is comprised of numerous utility product suppliers, businesses, manufacturers, growers, environmentalists, scientists and proponents of organic production. Service goals are simple, ensure that reasonable regulations do not impede innovation in organic production, allow for the recovery of nutrients from existing waste streams to eliminate negative impacts on environmental and public health, support regenerative soil biology, strengthen rural communities by increasing dedicated organic acreage, improve productivity, and increase equitable consumer access to organically produced food.

What do our members have in common, a real belief and so how it's real return, whereby we must be cycling the nutrients from the waste
one production cycle into the next. A real belief that organics must show leadership in reducing the greenhouse gas emissions from our food production services. A real belief that organic growers can do even more to prevent leaching of excess nutrients into our waterways and airways. And a real belief that the organic industry must evolve to better preserve carbon stores and wetlands and grasslands by helping farmers improve their productivity on the land already under cultivation.

Our members filter processes to minimize greenhouse gas emissions from the traditional composting methods for animal waste, all while abiding by the guidance decision tree for classification of materials and synthetic or non-synthetic in the USDA organic handbook to ensure that we are making non-synthetic products. Material review organizations including OMRI, CDFA and the Washington State Department of Agriculture have confirmed our members' processes
to be non-synthetic. Recovered nutrients are intended to be used as a complement to other nutrient sources and appropriate field management practices. Their use is not intended to mimic anhydrous ammonia like in conventional crop production. Instead, the products are intended to be used as a domestic climate-smart nitrogen source as part of the grower's organic systems plan. These supplemental nitrogen sources are derived from agricultural feedstocks or represent a major step in the right direction to minimize the negative impacts of the widespread use of sodium nitrate and other overseas organic fertilizer inputs.

It's our belief that policies recommended by the NOSB to the National Organic Program, which should be science-based and promote the goals of OFPA. We remain concerned that the NOSB's technical reports are not thoroughly reviewed and report on scientific data. Several stakeholders have previously provided similar
comments in prior meeting. We're greatly concerned that NOSB appears inclined to push organic production into a one-size-fits-all check off the box approach that completely ignores geographical differences between growing areas crops and where inorganic producers and inorganic production journey.

We trust growers to respond to insight-specific conditions. We believe that certifiers understand how to review organic systems plans to verify the improvements in soil health that recovered nitrogen products can support. We believe these products on replacing organic markets to address the goals of USDA climate-smart initiatives, as well as USDA's newly announced initiatives and support innovative American-made fertilizer to give U.S. farmers more choices in the marketplace. Thanks.

CHAIR POWELL-PALM: Thank you, Lee. Any questions for Lee from the Board? Amy?

MEMBER BRUCH: Sure. Lee, thank you
so much for your written comments and oral comments. Really appreciate. My question is in
terms of the role of return cycling nutrients. You touched on that briefly just now. We heard
another commenter mention about the need for boundaries when we are recycling -- when the
organic community is recycling nutrients, such as the example that was brought up as printed
newspaper. I was just curious on your thoughts on those types of boundaries, that recycling is
good, but we also need to be very specific in what we're recycling.

MR. FRANKEL: Thank you. And in this case, a proposal before the Board is specifically
kind of products derived from animal waste, and that are already being used in the compost and other
ways. So, you know, the question seems to be kind of moving us away from the real issue of, you know,
how can we take things that have been considered organic for the National Organic Program began and
make sure that those products are being used
responsibly.

I think that the -- you know, the efforts to put a percent limit on it is something that recognizes that there, you know, could be limit how products are used. But I guess getting back to your return question, it seems like this is a product that's already being used, or this is a source that's already being used. I totally understand why we would want to be very excluded. Or that this isn't printed colored paper, this is basic products coming from the livestock production sector where we're saying that we no longer want to have organic beef, we no longer want organic milk, organic eggs and kind of what are we supposed to do with the -- you know, some of the byproducts of that those production systems.

I believe that we should be incorporating them back into the crop production system. And I don't really see this as being something like kind of printed paper.

CHAIR POWELL-PALM: I would just --
MEMBER BRUCH: Lee, thank you for your comments. Go ahead, Nate.

CHAIR POWELL-PALM: Sorry. I have a quick follow-up. Lee, what do we do with the waste products now? I think that there's a big demand for poultry litter across the board. It seems like organic farmers are using it up. So I'm not quite tracking what you're saying with why would we lose eggs, beef and milk without these novel technologies?

MR. FRANKEL: Yes, I think it was kind of a real specific question saying, you know, should we put some limits on what we return back to the earth. And, again, maybe like used oil drums, you know, maybe you don't want to shut them up and put them in the field. But you're saying the growers use those byproducts from, you know, livestock production. So I'm in agreement that should be included in them. And that, you know, I would disagree that we would want to exclude those products from being part of the overall return.
CHAIR POWELL-PALM: All right. Thank you. Any other questions? Seeing none, thank you for your comments, Lee. Appreciate your time.

MR. FRANKEL: Thank you.

CHAIR POWELL-PALM: Next up is Jake Evans and we have a presentation.

MR. EVANS: Can you all hear me?

CHAIR POWELL-PALM: We can. So bear with us just one second and we'll get your presentation.

MR. EVANS: Oh, is it not?

MS. ARSENAULT: Decided not to use it.

Yes. So we're good.

MR. EVANS: Okay. Sounds good. All right. Thank you. Good afternoon. My name is Jake Evans. I'm the owner and CEO of True Organic Products. True has been in business for 18 years providing high-quality and compliant organic fertilizers to the production community. True is committed to ensure the USDA organic still remains the gold standard for agricultural production.
True filed the original petition to examine ammonia extracts in 2020.

First, I would like to thank NOSB and the crops subcommittee for the success of the work done thus far in completing their recommendation on the use of ammonia extract in organic crop production. It is evident from the stakeholder engagement and the newly announced vote to prohibiting just how important the proper regulation of this category of substance is.

The discussions at the fall meeting focused mainly on a process for creating ammonia via concentration of sugar. However, recently at True we focused on the stabilization process and discovered information that was not fully considered in the TR. The TR focused on the use of non-synthetic acid for pH adjustment, but did not consider that an ammonia a change in pH results in a chemical change.

Additionally, the technical for the stabilization of ammonia from a non-synthetic
source by addition of a non-synthetic acid during
the manufacturing process always produces a
non-synthetic final product. True found that
using either a synthetic or non-synthetic acid to
stabilize ammonia results in a chemical change,
creating a synthetic material under often.

Unfortunately, the flawed information
or TR was used as the basis of the classification
of a), this cannot and should not be ignored, as
it is a highly consequential or to remedy the
situation to as ordered, requested the crop
subcommittee to reconsider a's classification
decision. To further this process, True will file
a petition in the very near future with its scope
limited to the classification issues.

True will share a newly developed
flowchart describing different subclasses of a
category based not only the techniques used to
manufacture ammonia, but also to stabilize it.
True's updated petition will share that, one, NOSB
and NOP have the most up-to-date classification
analysis. Two, NOSB has information needed to refine the classification decisions. Three, the recommended prohibition on the use of non-synthetic AE (phonetic) is restricted to the types of AE that are in fact non-synthetic.

Four, we want share synthetic a substance that originated from concentration or stripping process are properly identified. And five, will enter the rulemaking process for AE with the most accurate information. In closing, True urges the crop subcommittee to expedite our upcoming petition to reclassify certain subclasses of manufacturer A substance to support NOSB discussions.

We suggest that limited scope TR focus specifically on the chemistry of stabilization of AE. We at True believe that these actions will not build -- will not only build on the great work you've already done on AE, but will also conserve the limited resources of NOSB, NOP and the organic community. Thank you.
CHAIR POWELL-PALM: Thank you for your comments. Looks like Logan has a question.

MEMBER PETREY: Hey, thank you. Jake, so in your statement, saying that there may be something that needs to be followed up in a TR, there were a lot of stakeholders that, you know, stated a lot of things in the TR that seemed to have holes through it and that needed to be looked at again. I know you're specifically wanting a limited TR.

But I'm curious if that's going to open it up to a lot of other people who had concerns that we need to look at if we as a board are saying, you know what, the TR is not sufficient, we need to look through. So I'm wondering if other people are going to, you know, say, well, we disagree with other parts of the TR and start adding in a lot of other petitions against that topic?

MR. EVANS: Yes. I don't know what other people are going to do. I know when it comes to the specific area of the TR, it's a pretty
science-based -- very science-based argument. So I can't control what other people think. I know, based on the 13 to 1 vote and the broad stakeholder community, I think there was a lot of compasses.

In this particular, we're talking about Motion Number 1, and the classification issue.

MEMBER PETREY: All right. Okay. And I see with, you know, liquid fish products, things like that, I mean, we're adding an acid to it and stabilize it as well in it which you may have products that do that and they're underneath the synthetic use of the 205.601 for that?

MR. EVANS: Well, that's -- yes, that's exactly what we're talking about, Logan, is, it's not a synthetic. It's not an acid to stabilize for microbial growth. It's an acid that causes chemical change. So it's much a difference, but that's why the TR I think would be useful.

MEMBER PETREY: So -- sure. I mean, even if the intention is different, do you think that there's any change in liquid fish in the
ammonia or anything in it when you add an acid to it? I know the intention is to prevent microbial growth, but do you think anything has changed chemically in that too?

MR. EVANS: No. No, I think, it's -- when it comes to the ammonium what we've seen, it's a chemical change. We're not talking about microbial degradation pH for microbial --

MEMBER PETREY: Right. Yes, I just didn't know if there was any ammonia, you know --

MR. EVANS: Yes --

MEMBER PETREY: -- in the liquid fish products that would be subject to the chemical change?

MR. EVANS: Liquid fish is actually a proof synthetic, because they have a synthetic acid.

MEMBER PETREY: Correct.

MR. EVANS: Yes.

MEMBER PETREY: That's right. Yes.

So I was just clarifying, yes.
MR. EVANS: But I mean, that's why it -- the TR would be great look, minimize TR to look at that exact issue.

MEMBER PETREY: Okay. Thank you, Jake.

CHAIR POWELL-PALM: Thank you for your comments, Jake. Moving on, we've got Patty Lovera next, John Foster after that, followed up by Margaret Scoles. Patty?

MS. LOVERA: Okay. Hi, everybody. My name is Patty Lovera. I'm the policy director for Organic Farmers Association. I'm going to cover a couple of topics and Kate Mendenhall, our director is going to cover a couple more in a little while.

So the first one on my list is the discussion document on traceability infrastructure. This is a hot topic for our members and it's been a high priority since OFA began. And OFA does support including acreage per crop on the organic certificate. But one issue
that our folks flagged was needing to make sure it works for different types of operations so it doesn't create a burden for some farmers that maybe do things a little differently.

So the example that came up is, producers who grow a lot of varieties every year on a fairly small parcel, might need a different way to estimate acreage, if they're doing lots of things on small acreage so that doesn't become a burden to put on the certificate. And then we also heard concerns from folks about using succession planting and if you're going to run into issues about what you're doing per year, not lining up with your acreage, if you're doing things on pretty fast cycles.

But they wanted to do this, but just flag that making sure it works for folks who farm that way. Our folks also supported including acres per crop on the certificate as well as in making it public-facing in the organic integrity database. A lot of our farmers are working with
certifiers who already do this, and they really
saw a benefit in standardizing that. Across all
of organic, we did hear that some large food
processors require farmers to sign nondisclosure
agreements that forbid them from disclosing this
type of information.

So if NOP required of everyone, you
wouldn't have buyers asking some, you know, putting
it in some contracts. If that was part of the
organic standards, everybody would have to do it.

And then we wouldn't have some buyers asking for
this nondisclosure for people thought that was the
way to deal with that problem. And then on the
universal bill of lading, we had really a lot of
enthusiasm from grain growers. And then the same
idea caused stress for other types of growers who
have different types of transactions like folks
who grow leafy greens who have like very frequent
transactions all of the time.

So we suggest that maybe there's -- it's
worth thinking about common forms or universal
forms per sector, right? And there's a different paperwork need for the types of transactions if you're doing bulk shipment of grain versus, you know, dairy versus vegetables, things like that.

And this also seems like an opportunity as we are developing new forms to be very deliberate, thinking about making them accessible for non-English speakers like starting from the beginning with the idea that there are language issues we could address so that organic is open to everybody, especially folks who are new to organic, that this doesn't have to be a barrier to being organic.

And then quickly on the excluded methods, we support finishing these definitions, getting them done, so that we can be as current as we can be. And we agree with the addition of cell fusion and protoplast fusion as outlined, but just like we heard from Jaydee, I think that recombinant DNA should be changed in vitro nucleic acid technologies so that we get more comprehensive
and we can line up with as international standards
like Codex. Thanks.

CHAIR POWELL-PALM: Thank you for your
comments, Patty. Based on your surveys, do you
think -- I believe it was a question posed to Julia
Barton of OFA that listing mixed vegetables, say
for those very sort of micro plots of rotational
vegetables, would that sort of fall and thus raise
the concerns of your constituents?

MS. LOVERA: I think so. Yes. They
just didn't want to have to do -- you people were
thinking about small operations that do a lot of
things in less than an acre and how I do that math.
And this comes up for conservation programs when
people deal with NRCS like I'm translating, you
know, feet into acres, because I have -- you know,
I do different beds and I do a lot of things. So
I think if there was an option to do mixed
vegetables or there was an option to say less than
an acre or something like that, it just doesn't
become this like mathematical exercise that shifts
especially if you do a lot of things in a season, because you're doing succession planting it didn't -- we didn't want that to become a deterrent to farming that way if that's how you farm.

CHAIR POWELL-PALM: All right. Any other questions? Yes, Kim.

MEMBER HUSEMAN: Thank you for your comments, Patty. Out of curiosity, were specific languages for subcommittee would be Spanish, but were other languages mentioned that would be helpful when looking at presenting BOL (phonetic) information, you know, with multiple language sources?

MS. LOVERA: I mean, Spanish is the one that comes to mind. I think in some parts of the country Hmong would be high on the list. But I think that's also something as you move forward with developments we should ask, you know, farming groups on the ground who -- and especially if we see, you know -- and we're having a conversation about transition and getting close to transition
like what communities are out there doing that work
what, you know, grassroots organizations are
trying to train people who are in their
communities.

And I think if we did some quick asking
around we could come up with, you know, the top
needs, but the two that we hear the most about are
Spanish and Hmong. But I'm sure in other parts
of the country there's other needs.

MEMBER HUSEMAN: Thank you.

CHAIR POWELL-PALM: Great question, Kim.

MS. LOVERA: But this also seems just
baking in from the beginning, so we're not after
the fact saying, oh, how are we going to translate
these, like let's think about it as we design new
forms.

CHAIR POWELL-PALM: Thank you very
much for your comments, Patty. Really appreciate
your work. Next up will be John Foster, followed
by Margaret Scoles and then Kate Mendenhall.
John, floor is yours.

MR. FOSTER: Thank you, sir. Thanks for the opportunity to participate in this process. It's one of my favorite times of the year. And thanks especially to the NOP staff and Board members for the ongoing commitment. I know it's not a small deal, but without you and the organic community together, the positive change wouldn't be reachable. So thank you.

My name is John Foster, I'm with Wolf & Associates, a consulting firm specializing in growing organics with integrity is probably a good as any summary. I'd like to especially welcome the new Board members on this long strange trip you're about to take. And I had five points I might just throw out to -- for suggestions.

Take the time to think about everything really critically, it's important. Consider everything with an open mind, favor evidence over opinion, and do what you can to get more ground in organic production. That's my opinion. First
slide appear is one of just two I have. I'd like to also just ask you to refer to a more detailed written comments from which these two short topics are pulled.

And these two are -- I liked are aspirational. So think about what could be, not necessarily what is. Around 605, we're pretty big at advocating for in the interest of encouraging more organic production by applying commercial availability to all items on 605. And we've had some experience, some evidence, a lot of confidence that there's existing opportunities for development of more organic -- certified organic ingredients and inputs.

But that is going to require commercial demand. There are several items on both the synthetic and the non-synthetic portions of 605 that I think could be produced using certified organic inputs and compliant processes. And we definitely want to support a mechanism to favor these organic analogues over other inputs that are
Second is another kind of novel concept I've been fooling around with, that is the commercial availability registry. I'd like -- we'd like to advocate that ACAs provide data to NOP listing the analysis and allowances they've made after confirming lack of commercial availability of inputs or ingredients. And this could apply for example, everything between seeds and flavors, everything in between. But if that aggregated and anonymized data could then be made public, then producers, suppliers, manufacturers would have that data that would incentivize research, incentivize development and commercialization of certified organic analogues.

I believe this will provide good new markets for organic crops and more options for manufacturers to go organic. Certainly, both of these options have -- you know, they're challenging, they're novel, but I think the -- I think any challenges on certification or problems
that come up can be met. And if you will allow me I believe that the organic juice would be worth the squeeze. Thanks very much.

CHAIR POWELL-PALM: Thank you very much, John. Kyla?

MEMBER SMITH: Hi John. Thank you for your comments.

MR. FOSTER: Hi Kyla.

MEMBER SMITH: I was wondering if you had any thoughts on who might be the owner of said commercial availability registry, because I believe at one point in time and not the too far distant past was a registry and it sort of fell by the wayside because of upkeep. So if you had any thoughts on that, I'd love to hear them.

MR. FOSTER: Yes. This is where I would love to see some of the newfound funding of NOP pick it and make it -- institutionalize it.

I think that past experience, and that wasn't the first try that was -- there were several tries before that. And you're right. They -- none of
them lasted. I feel like outside of an institutionalized owner of it, it -- the same thing will likely happen.

I also feel like the -- it's appropriate because this commercial availability clause is part of the regulation. Like it's part and parcel of the regulation and it ought to be owned by public really through in my opinion governmental process.

CHAIR POWELL-PALM: All right. Well, thank you both. Thank you for that question, Kyla. I felt like I could tack on a few more questions about how do we create all these registries necessary for many things, but we'll talk offline, John, to brainstorm more.

MR. FOSTER: You know where to find me.

Yes.

CHAIR POWELL-PALM: All right. Thank you for your comments. Next up is Margaret Scoles, then Kate Mendenhall, followed by Rodgers Koech. Margaret --

MS. ARSENAULT: I'm not seeing
Margaret on the line with us. Haven't been able to find her.

CHAIR POWELL-PALM: Okay. We'll go on, Margaret, if you're there. Please let us know and we'll fit you in as we move through. So next up, Kate Mendenhall.

MS. MENDENHALL: Great. Thank you NOSB members for the opportunity to speak before you today. Welcome to the new members. My name is Kate Mendenhall, and I'm the executive director of the Organic Farmers Association.

OFA was created to be a strong national voice and advocate for domestic certified organic farmers. Today, it will be addressing highly soluble fertilizers, human capital and climate-smart agriculture. OFA strongly supports the concept of feeding the soil, not the plant. We support limiting the use of highly soluble nutrients for use in organic production, because such use is incompatible with OFPA and good soil health practices.
Our farmers have voted to prohibit ammonia extract and sodium nitrate. OFA strongly supports human capital management efforts to better support the work of the Board and its members. It is vital the NOSB be fully representative of the organic community. Farmers and other members of the organic community who are self-employed often have large out-of-pocket expenses to cover their time spent fulfilling NOSB responsibilities.

We support the NOP hiring research assistants to support Board member-driven research needs restricted to summarizing literature reviews, technical reports and summaries of public comments. Managing conflict of interest and confidentiality commitments and then sharing that these assistants have organic knowledge is essential. We also encourage the NOP to consider expanding the allowable expenses for Board members to cover on-farm replacement labor, childcare, et cetera so that self-employed are not facing
economic hardship by volunteering their expertise to the NOSB.

In response to the NOP memo on February 23rd requesting that the NOSB facilitate public discussion and "explore how organic can advance in tandem with climate-smart agriculture to support our planet and our farmers," I would like to emphasize the contradiction that allowing certified organic hydroponic production poses to this effort.

The NOP asks the NOSB to "help reinforce and capture the connections between climate-smart agriculture and what many certified organic farmers are already doing." We support this and we highlight that organic soil farming sequesters carbon and hydroponic farming does not yet all the questions NOP asks around climate-smart farming and organic assumes soil-based production systems. Avoiding the issue of organic hydro is creating a huge mess in the marketplace that contradicts the value of organic. Organic
hydroponic production is undefined, lack standards. It's growing at a rapid pace. The NOSB recommendations on greenhouse production are now a decade outdated as technology in this industry has changed dramatically. The NOSB has tools to restore organics place as a climate-smart leader and must use its authority to do so by addressing greenhouse production and hydroponics.

Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments, Kate. Kyla Smith has a question.

MEMBER SMITH: Okay. Thank you. I wanted to ask you about the statement in your written comments about highly soluble nitrogen fertilizers, where it was stated that your committee and your members expressed concern over the ability for certifiers and inspectors and producers to be able to monitor this. And while they do in general oppose, you know, this concept and so would be in support of the prohibition.
So how are you balancing that? How are you providing support what things can NOSB or NOP due to bridge that gap between this need and concern with where we are with the prohibition that people are expressing an interest for?

MS. MENDENHALL: Yes, sure. I mean, I think that our policy committee put their effort into a broader policy. So, I don't have -- you know, aside from the 20 percent, I do think that that's a concern that hasn't been expressed before. I think farmers are feeling a concern about overly burdened paperwork and record-keeping like we heard Javier describe earlier, I think that's a concern.

I think right now is a tricky time for farmers. There's a lot of fertilizer angst at the moment with high prices of synthetic fertilizer driving conventional farmers to use our typical organic fertilizer sources. So it's a little bit of a stressful fertilizer time for farmers at the moment. And I think that sort of put that in the
context of this conversation could have driven us to not pass this specific policy.

So we actually are meeting our -- with our policy committee on Thursday and I'm hoping to tease out a little bit more understanding about why this 3 to 1 proposal did not pass our original policy process so that I can provide the Board with a little bit more understanding of if it was particularly tied to this proposal, or if it was in the broader context of just wanting a broader proposal that our committee wanted to support, or if it was just a tiredness about -- talking about, you know, the state of fertilizer at the moment.

So I apologize I can't give you more specifics right now, but I'm hoping to do so. And I'll put something in the chat or e-mail that you're here to share with the Board if I can do so on Thursday.

CHAIR POWELL-PALM: All right. Thank you for your comments, Kate. Next up, we have -- I think we said Rodger Koech is not on the Zoom
that we're seeing. So go to Mark Kastel and then followed by Ben Silverman and Phil LaRocca. Mark, the floor is yours.

MR. KASTEL: Thank you.

CHAIR POWELL-PALM: And just a second while we reset the timer. There we go. All right.

MR. KASTEL: I prefer the Harold Austin routine. My entire presentation will be my introduction. Thank you, Mr. Chairman. My name is Mark Kastel. I'm the executive director of OrganicEye. For all of you who truly care about the integrity of the organic label, I'm here to alert you that the certification process which we've been talking about, as it's constituted today is more show than substance. Ineffective busywork, honest farmers and business people and the American taxpayers are investing tens of millions of dollars per year in a system based on annual inspections.

And that system is not catching the major stop loss. The annual inspections worked
when I was a certified agricultural producer in
the 1980s as family scale farmers had their heart
in the organic movement, and were either direct
marketers or had personal relationships with their
wholesale buyers. But with over a $60 billion in
commerce today, that system has become a hoax.

As one of the country's preeminent
industry watchdogs who has worked with the USDA,
the Justice Department, the FBI, on the industry's
largest cases, I can tell you almost none of them,
almost none of the major fraud investigations have
started with annual inspections. Most have come
from current or former employees or competitors
ratting out the perpetrators.

We need to fundamentally reallocate
certification funding to more effectively catch
these offenders as an alternative to putting honest
farmers and handlers through the rear every single
year. An alternative would be to schedule full
inspections and audits conducted every 5 years by
very experienced individuals with backgrounds in
production agriculture and forensic accounting,
supplemented by liberal unannounced inspections
and testings.

Testing right now, neophytes, sometimes fresh out of the university, many without
any experience or background in production ag,
processing or accounting are going toe-to-toe with
experienced fraudsters. These agriculturalists
are having their lunch every day. As envisioned,
this reallocation of resources should be revenue-neutral annual inspections only when they
are warranted, very comprehensive reviews once
every 5 years punctuated by ample unannounced
inspections, spot audits, and abundance of
testing.

The multimillion dollar domestic and
international frauds that become public are an
embarrassment. But do any of you think that we
are doing anything more than capturing the tip of
the iceberg? I guarantee you, and I was just
working with the FBI on a case last week, that there
are problems out there, a multiplicity of problems
that will undermine this industry and maybe scuttle
it at some point.

If organic stakeholders from farming
communities, processors, marketers, or the USDA
officials would like to discuss these options
further, I would really encourage you to contact
us at OrganicEye. Thank you very much.

CHAIR POWELL-PALM: Thank you for your
comments. Logan has a question.

MEMBER PETREY: Hi, thank you. I love
the idea of really specialized people. Ag is very
complex and there's a lot of ways I guess people
can get around. Question on those 5-year audits,
you know, unexpected audits. Will you be prepared
that pays for those audits. I know that a lot of
times small farms, I'm sure any farm, it can be
very costly to get inspectors over and with that
amount of time. And that specialization, I would
imagine would cost more. Who do you expect that
would pay for that?
MR. KASTEL: Well, again, I'm -- okay, this is back of the envelope estimates. This should be revenue-neutral. We're going to eliminate 4 of the 5 years of annual inspections and concentrate those resources on doing it once.

So, I just get too many reports of what -- farmers are acquiring drive-by certifications. The documents that are the key are not being analyzed.

I had a conversation with the head marketer of the -- one of the grain cooperative -- organic grain cooperates in the country. And we were commiserating saying, look, this is all about creative writing. People are reviewing documents that aren't really qualified. And we were saying, look, we've been doing this for decades, if we wanted to cheat, how hard would it be? And he was saying it would be easy.

And, you know, that might be an oversimplification. But part of problem is that there's a economic disincentive for certifiers to find problems. If there is a world of trouble for
the certifiers and a world of expense, if they -- it's like imagine the policeman out on the beat, and in a half-an-hour, he's going to punch out, and his wife's going to have a hot dinner for him or her husband on the table. And then they find a real problem and they're going to have to write it up, you know, mediation, potential for litigation, engaging with the USDA. I'm not saying they're not doing it when they find it.

But there's a disincentive. And right now we have people that aren't seasoned and experienced doing quick work. They've had some rudimentary training. Their heart's in the right place, but we are missing the big picture. And it's possible to capture it. But right now, we're finding it after the fact.

I will remind you that the USDA said that everything was fine and buttoned down for years. And then we -- 75 percent of the Black Sea region, importers lost their certification after the Washington Post, who I worked with, have
spotlighted the problem. You know, after the fact doesn't cut it. We've got to be more proactive.

MEMBER PETREY: Thank you.

CHAIR POWELL-PALM: Thank you, Mark. Appreciate your work. Next up we have -- oh, yes. Oh, yes, great. Next up we have Ben Silverman followed by Phillip LaRocca and then Jane Sooby.

Ben, the floor is yours.

MR. SILVERMAN: All right. Thank you, everyone, for the opportunity to comment today. My name is Ben Silverman, co-founder and chief technology officer at Upward Farms located in Brooklyn. We're an aquaponic vertical farming company growing leafy greens and fish with the highest ecology standards and quality standards, so everyone can nourish their body, family and planet.

We've been in business over 9 years, and we look forward to continued growth as we set out to build our next farm in Pennsylvania. We support the prop subcommittee recommendation to
add carbon dioxide at section 205.601 A&J as petitioned. Our experience has been that the use of current alternatives such as the use of a sulfur burner to produce sulfuric acid to treat water has negative implications, both for the operators and the environment.

Burning sulfur produces sulfur dioxide, but not all the sulfur dioxide dissipates into the water, rather some is emitted into the air. That sulfur dioxide is toxic if inhaled, contributes to acid rain if emitted to the atmosphere. And in order to use those sulfur burners, we have to take significant steps to reduce those emissions as much as possible to avoid danger to the operators and the environment.

Additionally, the sulfur pellets are highly flammable and require special handling and storage. All in all, it's a very expensive operation to do it right, ensure that we don't create any environmental health and safety hazards. While there are some industries that
generate non-synthetic carbon dioxide as a byproduct of biological processes, there's currently inadequate infrastructure to support its use.

There have been small-scale carbon dioxide recapture systems, but nothing has been developed for our scale, and thus we need to contract a custom design and build. Additionally, it's difficult to find a partner that we'd be able to supply the volume and consistency we require in the local market, which would -- also has necessitated refrigerated trucking from great distances to meet our needs and have its own footprint attached to it.

We're committed to locating non-synthetic sources. However, until synthetic sources are available -- sorry, until sufficient sources are available, synthetic sources are a necessity. For these reasons, we support this petition and urge the Board to follow the prop subcommittee proposal and vote to add carbon
dioxide at 205.601 A&J. Thank you again for the opportunity to provide these comments and your consideration.

CHAIR POWELL-PALM: Thank you for your comments. Any questions for Ben? All right, Ben. Thank you so much. I appreciate your time. Next up, we have Phil LaRocca followed by Jane Sooby and then Emily Musgrave.

MR. LaROCCA: Well, I'm in California, so I'm going to start off by saying good morning even though it's late morning. Anyway, my name is Phil LaRocca. I'm the owner and winemaker at LaRocca Vineyards. I'm in the process of passing the baton to the next generation. I also sit on the California Organic Product Advisory board. And I am the chairman of the board for CCOF. I was first certified in 1975, so I've been around the organic community for quite some time.

I want to comment on a few inputs that are being looked at that have been around as long as I have. The first one I want to address is
bentonite. Bentonite is a colonial clay that we use in the wine industry to subtract excess proteins out of the wine, in particular white wines and roses. There are synthetic comparisons to this, but even commercial wineries will use the bentonite, because it is more efficient, little more of a hassle to prep, but definitely more efficient.

The second input I want to address is diatomaceous earth, which has been around from the first meetings when a bunch of guys like myself got together and called ourselves organic farms because we didn't use any synthetic controls in growing our crops. Diatomaceous earth has been around as a organic pesticide and has been a great tool for the organic farmer. And the processing in the early days, we actually used diatomaceous earth as part of a filtration product process.

We do not use it anymore, but there are several wineries that still plate -- plate filter and diatomaceous earth is essential to that form
of operation. Tartaric acid, again, been around forever. Tartaric acid is a byproduct of winemaking. And for us as an organic winery, it is a tool that we use with other methods. But it's a tool that we use to help control our pH. And by controlling our pH with the tartaric acid affords us the opportunity where we don't have to use any synthetic preservatives in our wine.

The last one I want to talk about is copper. Again, copper has got some restrictions as it should be, but it is a tool that grape growers use, stone fruit growers totally dependent on it and ammo growers as well. This was one of the very earliest tools, in the early days I grew apples and some peaches. This was one of the earliest organic tools that we had to fight curly leaf. We also use copper as a form of not having to use water for frost protection.

With that said, I'm going to end by saying I'm very grateful that the NOP finally put into effect the origin of livestock. It's
unfortunate, and I had to emphasize the word finally. I'm hoping that in the future when the organic community is so together to support an issue that it can be acted on quite a bit sooner.

Thank you for your time.

CHAIR POWELL-PALM: Thank you very much for your comments, Phillip. Any questions from the Board? All right, again, thank you, Phillip. Next up, we have Jane Sooby followed by Emily Musgrave. And then, can it be -- apologies, I'm getting this right, Gullatte. All right, Jane, the floor is yours.

MS. SOOBY: Thank you. Hello, I'm Jane Sooby with California Certified Organic Farmers, CCOF. First of all, I'd like to welcome new members to the NOSB. It's so good to see you here. I'd like to thank all NOSB members as well as NOP staff for their dedication to this democratic process of continual organic improvement.

As an accredited certification agency,
CCOF's guiding principle and comments to NOSB and NOP is advocating for standards and procedures that contribute to consistent decision-making between certifiers. Consistency is a crucial cornerstone of organic integrity. Consistency arises from clear and specific rules that have little room for interpretation, and thus lead to consistent enforcement by certifiers.

The dictionary definition of consistent is agreeing, in harmony, in accord. Here are some examples where clear guidance will lead to greater consistency. Rulemaking for pending standards. Examples of organic products that are commonly certified in the absence of federal rulemaking include honey, mushrooms and pet food. Organic certifiers are offering certification of these products using standards they've developed that are consistent with the NOP regulations, but without rulemaking there may be inconsistency between certifier requirements.

The materials subcommittee in their
research priorities discussion document included
the CCOF-suggested priority to research the
creation of an overarching ingredient review
process for ancillaries, incidentals, and inerts
used in organic processing and handling. This is
likely to be a challenging task, but the reward
will be greater clarity in reviewing petitioned
materials, and will standardize decisions made by
certifiers, many of whom have developed their own
approaches to evaluating these materials.

And an example of clear direction is
the Compliance Accreditation and Certification
Subcommittee's discussion document on oversight
improvements to deter fraud, where they set forth
specific elements that should be included in a
proposed universal bill of lading. This level of
guidance helps to ensure consistency between
certifiers in developing and auditing such
documents. We understand that some of these
examples require action by the NOP and are not
currently in front of the NOSB. But I hope that
Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments. Any questions from the Board?

All right, again, appreciate your time today, Jane. Next up, we have Emily Musgrave, followed by Kennedy Gullatte and then Robert Rankin. Emily, the floor is yours. Okay. There we go.

MS. MUSGRAVE: Good morning. Can you hear me okay?

CHAIR POWELL-PALM: Yes.

MS. ARSENAULT: Actually, Emily, you're a little faint. Can you get closer to the mic?

MS. MUSGRAVE: Is that better?

MS. ARSENAULT: Better, thanks.

MS. MUSGRAVE: Okay. Good morning. My name is Emily Musgrave. I'm the organic regulatory manager at Driscoll's. I would like to thank the NOSB for their commitment to protect the integrity of the organic program and uphold
the vital regulatory processes of the NOP.

My comments focus on the continued allowance of the following materials. Elemental sulfur, biodegradable biobased mulch film, polyoxin D zinc salt, humic acid, and micronutrients. Driscoll's supports the continued listing of elemental sulfur for use in organic production on the national list.

Elemental sulfur is a critical amendment for organic strawberry growers to decrease pH and alkaline soils and control powdery mildew. Organic strawberry growers commonly use both dusting sulfur and wettable sulfur in rotation with each other. Our growers are aware they must follow all label instructions and dusting sulfur also needs special attention to wind patterns to prevent drift.

Organic strawberry growers rely heavily on dusting sulfur and do not believe that the sole use of wettable sulfur could be a viable alternative for control of powdery mildew in
organic production. Growers have found the two formulations to have different efficacies and rotating the products limits plant stress, and reduces the risk of phytotoxicity.

Dusting sulfur is preferred over wettable sulfur, particularly when environmental pressure of powdery mildew is high, because it gets more thorough coverage during application. Driscoll's supports the continued listing of biodegradable biobased mulch films on the national list. Driscoll's advocates for keeping BVMS on the national list as there are still not many widely available ways to recycle this type of field plastic.

Our growers have long advocated for a BVMS that they can use on organic branches instead of taking their polyethylene plastic mulch to the landfill. Driscoll's supports the continued re-listing of polyoxin D zinc salt on the national list, as it is an extremely effective tool to control botrytis on strawberry, blueberry, and
raspberry crops. It is one of the most effective tools our berry growers have against controlling botrytis in organic systems. And it would be a huge blow to organic growers to have this material removed from their toolbox.

Driscoll's supports the re-listing of humic acids on the national list as this is one of the most widely used soil-applied or fully applied products used by our growers across all berry types. Driscoll's advocates for the re-listing of all micronutrient products up for re-review on the national list. All the micronutrient products up for sunset review are important tools for organic growers, especially as plant and soil amendments are a critical tool for producing viable organic plants.

I thank the National Organic Standards Board for your service as always, and for your consideration of my comments.

CHAIR POWELL-PALM: And thank you for your comments and your time today. Any questions
for Emily from the Board? All right. Thank you so much, Emily. Next up, we have Kennedy Gullatte from NOC, followed by Robert Rankin, and then Kiki Hubbard. And I apologize, am I getting your last name right?

MS. GULLATTE: No, you actually are.

Thank you.

CHAIR POWELL-PALM: Okay. Good, good. Thank you.

MS. GULLATTE: All right. Good afternoon. I'm Kennedy Gullatte, and I'm speaking on behalf of the National Organic Coalition, minority opinions if NOSB's subcommittee decisions and public materials. NOC urges NOSB committees to include minority opinions in their published materials. The omission of minority opinions does disservice to the democratic process and all the expertise that comes to this Board.

Minority views inform the deliberations of the whole board, reflect ranges of views of all state coders and are common to the
FACA boards. The lack of statement of minority opinions stifles informed decision-making. Accuracy of representation matters. Accuracy of representation matters. When NOSB members present a summary of a public comment received on a material petition or other issue, sometimes comments received on the materials are misinterpreted by the lead.

The lead will state that the comments are in favor of re-listing when in fact many of the comments may have come from certifiers who merely provided the number of operations that lists the material on the organic system's plan. This number may not be an accurate representation of the numbers of operations that are actually using the material. Since the number does not accurately reflect the actual use, this data cannot be properly used. We want to strive to improve accuracy going forward.

Global organic movement consistency, just as the U.S. Organic Regulatory System benefits
from consistency of interpretation application, the international organic movement benefits from consistency as well. There are a few instances where the U.S. system conflicts with our trade partners, organic neighbors, IFOAM interpretations, and codex regulations. Where possible, we should bring U.S. instances and alignment with the global organic movement. Continuous improvement as a community value, not values continuous improvement because we understand that organic agriculture is based on an understanding of ecology and complex systems.

We did not see silver bullets, but improve ways of working with nature. Continuous improvement is visible in the innovative approaches we have seen developed in organic systems, such as pasteurized poultry and organic no-till. It's most visible on offer in the sunset provision which provides for the periodic reexamination of materials used in organic.

Organic agriculture is no longer small
and it is global. Because of this growth, the USDA must be willing to engage in rulemaking and progress towards organic principles. The USDA must support continuous improvement by educating the Office of Management and Budget and others to make frequent regulatory updates as organic grows toward achieving our goal of agro systems that are ecologically social, and economically sustainable. Thank you.

CHAIR POWELL-PALM: Thank you very much for your comments. Any questions from the Board? I have a quick question. You were saying that it might be misrepresentative of actual numbers when we receive from certifiers the survey of operations, who use a given substance. Do you have a recommendation for how better to gather that information to inform our understanding of its use in the industry?

MS. GULLATTE: Yes, thank you for that question. No, that's something that I think I need to discuss with my organic coalition because I
think they know a little bit more about the background of actually how that happens. But I would love to get back to you when I find the answer, I'll --

CHAIR POWELL-PALM: Would appreciate it. Thank you, and thank you for your comments. Next up, we have Robert Rankin, and then Kiki Hubbard, followed by Matthew Dawson. Robert, the floor is yours.

MR. RANKIN: Thank you. Good afternoon, everyone. Robert Rankin, International Food Additives Council. IFAC is an association representing manufacturers and users of food ingredients. That includes a number of substances permitted for food -- excuse me, for use in organic handling.

IFAC strongly supports the re-listing of carbon dioxide and sodium phosphates at 205.605 B, as well as pectin at 205.606. These ingredients are used in alignment with organic principles, and they're essential to organic food production.
Carbon dioxide is used by IFAC members to produce carbonated organic certified beverage products. We are not aware of additional commercially available organic alternatives that have emerged since the last review.

Therefore, removing carbon dioxide from the national list would likely result in a reduction in the number of certified organic carbonated beverages currently on the market. As a result, carbon dioxide remains essential. Sodium phosphates also remain essential to organic food production. Setting phosphates perform important functions in organic dairy foods, including stabilizing proteins and promoting emulsification.

While other substances such as citrates can replace sodium phosphates in some dairy applications, such as processed cheese products, our members report sodium phosphates perform better in most cases, and citrates cannot replace sodium phosphates in all applications. We are not
aware of any new or compelling evidence regarding the potential health impacts of phosphates. However, I'd like to highlight new research sponsored by IFAC. This shows the majority of dietary phosphorus comes from natural sources, and that added phosphorus in the form of phosphate food additives has actually decreased in the food supply between 1998 and 2016.

In addition to their use in dairy foods, sodium phosphates help improve the quality and stability of meat and poultry products. Therefore, we not only support re-listing sodium phosphates for use in dairy foods, but we also ask the NOSB to consider revising its adaptation to include meat and poultry products labeled as organic.

Finally, IFAC supports the re-listing of pectin. Pectin is found in almost all jams and jellies labeled as organic in the United States. Pectin is also used in bakery fillings and toppings, fruit preparations for dairy
applications, protein drinks, yogurts, confectionery, fruit beverages, and nutritional health products labeled organic. Supplies of organically produced fruit citrus peels remain insufficient to produce volumes of organic pectin needed to meet commercial demand for the many applications where pectin is needed.

Therefore, pectin remains essential to organic food production. Thank you for your attention. That's all I have.

CHAIR POWELL-PALM: Thank you so much for your comments. We do have a question. First Brian and then Kyla.

MR. CALDWELL: Thanks, Robert. I apologize, this isn't about a specific substance, but several of the consumer groups in particular have registered concern about some of the toxic substances that can get into organic foods from either contact surfaces or packaging surfaces. And, you know, the PFAS is a big deal, BPA and the phthalates were also mentioned.
I'm just wondering what your organization is thinking about how to deal with this sort of really entrenched problem. And maybe, I don't know, like I say, I know you haven't been preparing for this question, but I'd be very curious to hear --

CHAIR POWELL-PALM: Oh, we lost your mic there, Brian.

MR. RANKIN: I think I got the majority. I think he was about done. I appreciate the question. You are correct that this is not something at the top of IFAC's list, we deal with direct food additives. PFAS, BPA, phthalates are things I would consider to be indirect food additives or food packaging materials. If it's okay with the group, I will try to get some additional questions, a little detail into this because again, this is -- I would venture that this is more of a packaging related question than it is a food manufacturing question just in the sense that of using the direct food
additives that I represent, like phosphates and pectin to go into the food product versus potential leaching of these materials from packaging.

So I also do work with some packaging groups who might be able to address this question.

So certainly, if I could follow up maybe with Michelle and get a little bit more detail on the specific question, and then try to work with some of these groups between now and the fall meeting to answer that. It would also -- you know, I'll take a look as well as some of the comments you referenced that maybe comment about some of these materials. So that's what I can -- and maybe try to do between now and the fall that's helpful.

MR. CALDWELL: Great. Thanks a lot. I really appreciate it. And we're looking for any kind of input that we can get on these things. I'm not lead on this topic, but I'm very interested in it. So thanks very much.

MR. RANKIN: Okay. I mean, obviously any of the -- some of these things you mentioned
are -- well, I'll take a look at the comments.  
So, thank you.  

CHAIR POWELL-PALM: All right. Thank you, Brian. Next up is Kyla.  

MS. SMITH: Robert, thanks for your comments. I wanted to actually ask you a comment that is pertaining to your written comments, particularly around the phosphoric acid annotation change. You made a statement in the comment that stated the petitioned expansion will not result in an increased phosphorus content in finished food products, and that should not be a concern to the NOSB.  

And I just wondered if you could speak a little bit more to any knowledge that you have of particular finished food products and like uses that the particular functionality and application of phosphoric acid of -- in extraction process as it was -- or petitioned for the annotation change, and how that would relate to a finished food product wasn't entirely clear. So I was just wondering
if you had any more information in regards to that.

MR. RANKIN: Sure. I will first state that, yes, I can address this in my own comments, because this is one that we, you know, because we supported phosphoric acid and do support phosphoric acid for its existing permissions in organic food production. And looking at our comments in your question, my view of use of phosphoric acid to adjust the pH of an extraction solvent to extract these materials, in my view, that is something that's done more on the front-end of the production process, and that does not mean that that material would have a real presence in an ingredient or a food.

So, I think that's probably my first response to your question there. I will say though that we didn't do as much in terms of looking at supporting that as we did the sunset review material. So if there is a little bit more that we can provide, I can take this back as well and see whether we can provide a little bit more
information on our end as to -- you're mostly interested in whether the petitioned expansion would result in higher levels of phosphoric acid or phosphorus in the foods?

    MS. SMITH: Yes. So just it seems like that this would be acting more as like a processing aid, but it wasn't really clear in like what types of ingredients or it was clear that it was -- would be used as an extraction process for an ingredient, but ultimately what then those ingredients like would get used in finished food products for, it was not clear. And --

    MR. RANKIN: Okay. I don't know either off the top of my head. So let me see if I can figure it a little bit more on our end and help provide that for you.

    MS. SMITH: Thanks.

    CHAIR POWELL-PALM: All right. Any other questions for Robert? Thank you very much for your comments and your time, Robert. Appreciate it.
MR. RANKIN: Thank you.

CHAIR POWELL-PALM: Next up, we have Kiki Hubbard, followed by Matthew Dawson, and then Adam Seitz, and then we will take a break. So, Kiki, good to see you.

MS. HUBBARD: Thanks.

CHAIR POWELL-PALM: All yours.

MS. HUBBARD: Thank you. Thanks to all of you NOSB members and the NOP for creating this virtual space today. I'm Kiki Hubbard, I'm the director of advocacy and communications for Organic Seed Alliance. And for those of you who aren't familiar with our work, we are a mission-driven organization that works to ensure organic farmers have the seed they need to be successful and we achieve this goal through research, education and policy advocacy.

My comments today will focus on the materials subcommittee's excluded methods proposal as well as organic seed. We have been very supportive of the subcommittee's excluded
methods work, which spanned, gosh, nearly 10 years
now I believe and we have supported all of the
excluded methods proposals that the Board has
unanimously passed to-date. We also support the
current proposal on determinations for cell and
protoplast fusion. And we strongly support the
Board's recommendation within this proposal that
the NOP develop a formal guidance document to
include the criteria, definitions and excluded and
allowed methods tables that were developed as part
of previous proposals.

I think we can all agree that
understanding and addressing plant breeding
techniques that may or may not align with the
excluded methods definition is critical work, and
that the lack of clarity risks slowing progress
toward another organic integrity goal, which is
to plants more organic seed on organic land. And
this is an important point of context for the
excluded methods conversation because regulating
excluded methods is more feasible within the
confines of certified organic seed production than
it is within the conventional seed space.

And as long as growers -- organic
growers are mostly sourcing conventional seed that
is produced outside the rules of certified organic
production, it's going to be difficult to require
transparency regarding the methods behind the seed
organic growers are using. A few weeks ago, OSA
was proud to release the third update to our state
of organic seed report. And unfortunately, our
most recent data shows no meaningful improvement
in organic producers using more organic seed
compared to 5 years ago.

This data makes clear that improvement
in organic seed sourcing is not happening without
regulatory changes. We now have 15 years' worth
of data on organic seed sourcing. And this is
where we are. I'll be expanding on these findings
during a presentation to the NOSB next week. But
the take-home is that organic seed availability
has increased tremendously since NOP was
implemented 20 years ago.

And it's time that policy follow suit to protect the progress that we've made and to ensure that organic farmers plant more organic seed, and that more organic food begins with this critical first input of organic seed. We hope that NOP will reconsider its rulemaking priorities by including the timely priorities of both excluded methods as well as an update to the organic seed regulation. Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments, Kiki. Any questions from the Board? Amy.

MS. BRUCH: Yes, thank you, Nate. Thank you, Kiki. Appreciate your time here today and your written comments, and then looking forward to your presentation for our upcoming board meeting next week. This is really fascinating for me, this subject in particular, and it's really important. I think you made a good point about the guidance, you know, we can't necessarily do too much if folks
are, you know, using conventional seeds that industry isn't as transparent as what we want our organic processes to be.

I was wondering if you have some more information on international producers and their chains of developing seed and just how, you know, our program is a very global program now, and I think there is tremendous efforts being put into this arena domestically. I was just kind of curious on an international front.

MS. HUBBARD: Yes, we don't collect international data. I can point you to some reports by international partners. It is fair to say that there has been more progress in trying to close some of the exemptions to use non-organic seed in other countries. And that's all I can say. At this time, we do not have data at our fingertips, but I could point you to some promising leads.

MS. BRUCH: Okay, sure. That'd be helpful. Thank you, Kiki.
MS. HUBBARD:  Thanks, Amy.

CHAIR POWELL-PALM:  We have a question from Mindee.

MS. JEFFERY:  Thank you so much for your work on this subject, Kiki. Just to really encapsulate it for myself. The foundations of transparency and organic supply chains, as far as excluded methods really has to start with organic seed. Okay. That's -- want to make sure I got it like in there.

MS. HUBBARD:  Yes.

MS. JEFFERY:  Appreciate you. Do you have anything else you wanted to say on that in the sense of -- especially regarding the TBD list as we move forward?

MS. HUBBARD:  I mean, just that there are going to remain challenges in terms with transparency, because some of these methods are hard to test for, you can't test for them. And so coming together as an organic community to create processes and policies that support more
transparency, and that may clear which methods are
excluded or not, is going to go a long way in both
supporting the integrity of the organic label as
well as ensure that we are encouraging more organic
seed usage across the country.

CHAIR POWELL-PALM: All right. Thank
you, Mindee. Javier has a question.

MR. ZAMORA: Sure. Kiki, thank you so
much for talking about our seeds. And I just have
a question for you. And this is just a -- something
that I've seen lately, as a organic producer
extends his or her operation, the limitations of
sourcing organic seeds are just greater. And I'll
give you a really good example. Are you -- I think
I froze. Are you okay? Are you listening?

MS. HUBBARD: I can hear you, yes.

MR. ZAMORA: Okay. A couple of years
ago, our Early Girl tomatoes, our seeds, I saw the
package that came out of China. And this is
something we organic growers in the Santa Cruz area
have relied heavily on, you know, dry foreign
tomatoes and seeds that are organic. So I -- my question to you is, what -- do we know what the percentage of organic seeds are coming from other countries that are not necessarily produced in the United States?

MS. HUBBARD: We don't have data on where all the organic seed in the commercial marketplace is being produced. We do not have that data. I mean, the best way to get that data is to go to the industry themselves and ask for, Javier. You mentioned -- just quickly, I'll touch on your point about as you increase scale, or you're working to transition into organic.

Yes, there are a number of reasons why organic producers haven't been able to source more organic seed. One of them is quantity, especially as they scale up. And that's where the important role of certifiers and inspectors come in, in terms of encouraging continuous improvement year-to-year and encouraging for example, earlier communication with seed producers and seed
suppliers about which varieties are needed, not only in an organic form, but also in the quantities they need.

This is very much tied to the challenges that processor and buyer contracts pose as well. In our most recent data, more than 30 percent of organic farmers who responded to our national survey, more than 30 percent said that these contracts with processors and buyers are serving as a barrier to increasing organic seed usage, because too often these contracts dictate a variety be grown that's not available as organic, or they're supplying the seed directly, and it's not organic.

That is a huge opportunity. Right now, it's a huge challenge to increase the more organic seed usage, especially with larger scale operations. And so there's a real need for your organic community and for you as a board to come together about this gap as we see it in the regulatory space.
CHAIR POWELL-PALM: All right. Thank you so much, Kiki. Next up we have Matthew Dawson, and then Adam Seitz.

MR. DAWSON: First of all, I just want to thank you for your service, the organic community, and the opportunity to participate today. My name is Matt Dawson. I am the aquaculture director for Upward Farms located in beautiful Brooklyn, New York. We've been operating for about 9 years and are looking forward to continue growth with our strong consumer demand that we -- as we set out to build the world's largest vertical farm, which is currently in the design phase.

Upward Farms is an integrated aquaponic vertical farm company growing certified organic leafy greens, but also best aquaculture practices certified fish under the highest ecological and quality standards available. We do hope to become certified organic on the aquaculture side as soon as possible, as I'm here today. And we -- while
we recognize that several priorities compete for attention, we're asking the NOSB to begin reconsideration of inputs and substances on the -- for exclusion on the national list as aquaculture practice standards, which have been previously considered, we trust will be working their way through the proposed rulemaking.

We believe organic food, including seafood, provides outsized benefits to consumers, local economies, and the planet alike, and drives food production towards sustainability. With the recent executive signing of the Aqua Act, and the number of land-based facilities currently in the design or construction phase, the aquaculture industry here in the U.S. is actually poised for growth at an unprecedented rate. This means that the NOSB has a real golden opportunity not only to shape, but to elevate industry standards while they're being established.

But just a few benefits to kind of gear yourself towards land-based restricting
aquaculture such as ours that currently provides -- they provide reduced impact to native fish populations and ecosystems, minimal need for antibiotic use, some of the highest food security, localized production, thereby reducing the food miles, greenhouse gas emissions, and related climate footprint, complete traceability of the consumer including accountability of production inputs and outputs.

And you all know the benefits that organic practices bring to people on the planet, you know them far better than I. You are seen as industry leaders who have the agency to lead the industry towards positive change to make positive impacts, and I'm for you to use the agency to be proactive so that regulations can support the proactive positive change we all agree we so desperately need. I want to thank you again for the opportunity to talk today and provide these comments and for your consideration. Thank you.

CHAIR POWELL-PALM: Thank you so much
for your comments and taking the time to tell -- speak with us today. Any questions for Matt? All right. Thank you again, Matt. Lastly, before our break, we've got Adam Seitz with QAI.

MR. SEITZ: Good afternoon. My name is Adam Seitz and I serve as a senior reviewer of policy specialist for Quality Assurance International, and SF International Company of a leading provider of organic certification services worldwide. Check your local grocery and you'll find the QAI mark well-represented on its shelves.

First, thank you, NOSB and NOP for your efforts and for the opportunity to comment. On research priorities, we were a bit surprised to see the addition of a priority focused on ancillary ingredient review. It is unclear what the intended outcome of this research priority is given there was already a unanimously supported 2016 NOSB recommendation on a review process for ancillary substances. It's a complicated topic with various perspectives, and while most of the positions on
ancillary ingredient review are justified for one reason or another, ultimately the unanimously passed 2016 recommendation establishes a workable path forward for consistency if implemented.

Sunset review, please see our written comments detailing the use of sunset materials by QAI certified operations. It's worth noting that every handler input up for sunset review is in use by a QAI-certified operation. Regarding ethical guide sunset review, QAI asked the NOSB discuss and potentially clarify via annotation the permitted forms of ethical guide specifically with regards to whether acid leach activated or treated forms are permitted by its national list inclusion. Please see QAI's written comments for background on this topic.

On sodium carbonate sunset review, we request that the NOSB examine the prevalent manufacturing processes to ensure appropriate classification and/or annotation as it appears sodium carbonate may be more appropriately listed
at 605-B with an annotation to only permit forms produced via the Turner (phonetic) process.

Phosphoric acid; QAI does not have a position on the current annotation change petition. However, while examining a potential annotation update, please consider correcting its current national list inclusion. The current annotation allows phosphoric acid for cleaning of food contact surfaces and equipment only. The listing of phosphoric acid as an approved cleaner at 605-B causes confusion regarding its permitted uses.

Cleaners are nearly always removed from food contact surfaces via water rinse prior to contact with organic product. Sanitizers, however, are rarely removed from food contact surfaces via water rinses. Doing so typically violates label use instructions and their purpose. There appears to be uniform acceptance, at least based on current interpretations of what is and what is not required to be on the national list,
that cleaners removed via validated and intervening event do not need to be listed, whereas sanitizers that are not removed do require inclusion on the national list.

This is of course pending further discussion on the food context substances can of worms. Depending on how the NOSB addresses the current phosphoric acid annotation change petition, it may be appropriate to either remove phosphoric acid from 605-B entirely, if only intended for use as a cleaner, or to annotate as allowed for sanitizing food contact surfaces and equipment. Thank you for your time.

CHAIR POWELL-PALM: Thank you for your comments. Any questions from the Board? All right, appreciate it, Adam. We're going to break for 15 minutes. Coming back at 45 after the hour. We're going to start with Bill Wolf, and then Linley Dixon, and then Tim Cada. So see you all back at 45 after the hour.

(Whereupon, the above-entitled matter
went off the record at 3:29 p.m. and resumed at 3:45 p.m.)

CHAIR POWELL-PALM: Are you ready to go, Michelle?

MS. ARSENAULT: Bulls eye there. One moment, we'll get Bill's slide up.

CHAIR POWELL-PALM: Okay. Sounds good.

MS. ARSENAULT: One moment, Bill. All right.

CHAIR POWELL-PALM: All right. Bill, the floor is yours.

MR. WOLF: Wow, okay. You guys are really on time. This is amazing.

CHAIR POWELL-PALM: It's the U.S. government, sir.

MR. WOLF: Well, I would say that every NOSB meeting, I've never seen comments actually hit the time that was on the schedule. And now I'm using up my time.

Okay. I am Bill Wolf with Second Star
Farm and Wolf & Associates. I've been an organic farmer, entrepreneur and consultant for 50 years, focused on increasing organic acreage to foster better stewardship worldwide. NOSB topics were simpler at the first NOSB meeting 40 years ago. Today you tackle more issues than any other FACA in the entire country. I thank each of you for the awesome volunteer work you do. And I strongly urge you to receive more staff support.

Slide 2, please. Organic has grown exponentially, but infrastructure has not kept up. Wolf & Associates submits a range of written comments, including ways to address this growth. We recommend prioritizing and sometimes rejecting non-essential topics. This means triage. We also and, John Foster, my associate, addressed this earlier, strongly request that commercial availability apply to Section 605. I'll get into more details on two of these. Viewing the National List as a toolbox for growth and improvement and accepting expert support for your work.
Slide 3, please. The National List is a toolbox, not a soapbox to attract political and non-organic social agendas. The goal should not be to shrink the list. Famers and handlers need to complete a robust set of materials that meet the strictest evaluation criteria in the world. Annotations should only clarify, not complicate and the decisions you make to protect choices, materials that aren't widely used now, maybe useful in the future, organic farmers deserve and need a robust toolbox. When publishing proposals for comment, please make sure the information is accurate, which takes me to the next slide.

As an advisory board, your job is to make recommendations in difficult positions, not be experts on everything or expend valuable volunteer hours on operational processes. Three areas where expert's important, will help you do your work, verify facts, help prepare subcommittee recommendations, summarize and accurately report on the content of oral and written comments and
draft your recommendation so that they can actually be accepted, implemented and enforced.

Slide 5, please. Earthworms are a de facto mass found in organic agriculture. I've brought earthworms to in-person meetings and so these virtual webinars will have to suffice now. When you vote, please consider what would be good for them.

Slide 6, please. Applying all of these principles. We have submitted comments on numerous topics, some are listed here, please review it.

Slide 7. Thank you for this opportunity.

CHAIR POWELL-PALM: Thank you, Bill. Appreciate your time and your work in the industry. Any questions from the board?

I have just one. Since you did note that we are on time, I better throw a wrench on that. Could you speak a little bit to, if we're saying in the next 10 years, we want to see organics
be half the food market, not just 5 percent. What are the key moves that either regulations, the market or us as the leadership and voice of the community on NOSB can be making to help catalyze that more rapid transition of farms to organic, but in a way that meaningfully supports farming families?

MR. WOLF: Good question, complex question and yet fairly simple. One of the biggest challenges I think the organic community faces is our divisiveness. What I mean by that is that because there's tension and messaging to the public and to the media and to government officials that there is, that we don't, we aren't unified about many things. We're easily ignored. It's easy for the Secretary of Agriculture to say no, I'm not going to do this, I'm not going to do that. Or that the USDA is going to not really treat organic as a major climate change initiative. They're going to move elsewhere.

So, our very divisiveness plays a huge
role. When you actually go back to what the USDA Organic Seal represented in 2002 to 2003, when it first appeared, the public considered it the most trusted label ever in the marketplace. That declined from the 90 percent tile to below 50 percent. I don't know the current poll number, but it's not a trusted seal in the way it was. And that hurts all of us regardless, I mean, there are problems with certification. There are some fraud, et cetera. But the fundamentals are sound. And so a united front would make a huge difference. And with those differences and disagreements, we need to hash out and have a place to hash out, rather than being the circular firing squad.

The second part is acreage in U.S. with a huge amount of organic production is still crops that are imported that could be produced here. I understand and accept and appreciate bananas and coffee and all kinds of crops that can't grow here. But the ratio of grain, the ratio of acreage isn't even close to 5 percent acreage in U.S. and focusing
on encouraging that acreage, creating economic incentives. If you look at what the European Union is doing compared to what the USDA is doing, it's like night and day. We're tolerated versus accelerated.

So, I don't want to get you too far off your time schedule. But those would be my two biggest points of really getting to 50 percent.

CHAIR POWELL-PALM: I so appreciate that, yes. I think protecting what we've built, but also promoting it needs to go hand in hand.

All right. Thank you so much for your comments.

MR. WOLF: Thank you.

CHAIR POWELL-PALM: We'll go on to Linley Dixon. And then we'll have to Tim Cada and Jill Smith. So, Linley, please go ahead.

MS. DIXON: Hi, I'm Linley Dixon, Co-Director of the Real Organic Project and owner of a certified organic vegetable farm in Southwest Colorado. I want to simply remind the NOSB and NOP that climate change is the environmental crisis
of our time. And it's not clear to consumers that organic is already a label that has so many climate benefits. I believe this is because the Nash organic program has failed to uphold the language and OFPA, specifically the requirements to maintain and improve healthy soils. There is so much greenwashing and confusion around what constitutes climate smart. We've even seen it today. Everyone's claiming it and it's only going to get worse.

I'm going rogue today to share a story that an organic pioneer shared with me in my travels through the organic project. And it's helped me to wipe away the confusion that creeps in while listening to all the lobbying from various stakeholders. This organic pioneer told me to imagine a continuum of the most sustainable organic, regenerative, whatever term you want to call it, climate smart farm on one end and then the most climate destructive farm on the other.
And imagine that every operation falls somewhere along that continuum. This farmer said that the most sustainable farm at the start of the continuum is simply a farmer with a shovel and some seeds. And then the more inputs you add, the further down that line away from perfect sustainability you're going to go. And so you get to the very opposite extreme where you have either a confinement or a hydroponic operation where all of the inputs, including the soil and all the fertility are completely sourced externally, regardless of whether or not the inputs are on the National List, they all have a story behind them. And as one former NOSB member told me, it's not a story you want to hear.

In short, these inputs had a climate impact to get to the farm. And to really be climate smart, you're going to have to sequester that carbon back. I'm not so naive as to think that all the farms can be that beautiful image of a farmer with a shovel and some seeds. That's why
we have a National List in our organic program. But my hope is that this image of the continuum, based on adding more and more inputs, leaving you further and further astray from that true sustainability can help you clarify your thinking and you can use it in your decision-making. You'll have to draw that arbitrary line somewhere along that continuum for what is organic to you, guided by OFPA.

We're all going to inevitably choose it in a different place. But remember that every input you approve in organic will inevitably disincentivize a more sustainable way. As some of our real organic farmers have said, allowing something often inadvertently mandates it because it results in a cheaper way. Please use your esteemed position as National Organic Standards Board members to publicly fight for the language in OFPA that describes what organic farming is. And we'll remind the world why organic is always the best choice, especially when it comes to
climate.

Thank you for volunteering your time and I hope this story can help guide you through all of the greenwashing fog.

CHAIR POWELL-PALM: Thank you, Linley. That was lovely. Does anybody on the board have a question for Linley? Hearing none. I have a question. And similar to what I asked Bill Wolf, despite everything, we're still only 5 percent of the market. We're still only 1 percent of the land. Well, what's it going to take to get to 50 percent of the market? And hopefully all of that grown domestically or everything we can climatically grow domestically, how do we get that position at the table for being the climate smart solution and making it so that we are able to leverage everything we've built to actually have a meaningful impact in the biggest challenges we're facing, as you said it in the beginning, climate change?

MS. DIXON: I think we need to be
louder. I think we need to have acted as farmers. I think we need to stand up for what we believe in. I think we need to describe organic as more than just something without unapproved inputs on it because it is so much more. I live in an organic farming community, lots of organic farmers and growing. And there are only a handful that are certified organic and I believe that is because we are failing to enforce OFPA and be very vocal about what organic is. I think it's becoming a more industrialized label. And so many of the next generation of farmers are not seeing themselves as organic farmers anymore and they are, and we need to bring them back by, you know, being vocal as a community about who we are. CHAIR POWELL-PALM: Is there a way to be vocal as a community without the circular firing squad? MS. DIXON: I actually don't know that there is a circular firing squad. I think the organic movement are the organic farmers. And I don't think we, you know, these basic tenants, the
principles about what organic farming is are across the board. It's what the organic farmers believe in. And I think the industry has invented a circular firing squad. I don't think it really exists among the farmers.

CHAIR POWELL-PALM: Thanks for your comment today. Appreciate it. Next up we have Tim Cada follow by Jill Smith and then Dave Chapman.

MR. CADA: This is Tim.

CHAIR POWELL-PALM: All right. We can hear you. Go ahead.

MR. CADA: Good. Hey, my name is Tim Cada, I'm organic farmer from Clarkson, Nebraska. Farm has been in the same family since 1871. I got certified in '94 with our 400 acres. This year we have about 1,100 of which half is rangeland. We do not rent any ground. I have served on numerous OCI Boards, state and internationally. We are certified by OneCert today, couple of people today, I know that we're on, it's like four or five of you, it's kind of cool to see you. This
meeting kind of reminds me of old OSGI (phonetic) days.

Organic fertilizers changed a lot in the last 25 years. More large companies see a need for more potent nitrogen source and it kind of get frustrating. A lot of big farmers that have a little bit of organic are testing the waters. Or they just want to make easy money, bouncing in and out as it fits their schedule. Clean out a machinery, mixing grain, do they really care about anything but the money. I see it in my neighborhood. I've heard about it in Eastern Nebraska. Actually in Nebraska as a whole, just there is a comment here and a comment there where somebody is using herbicide as a burn down. And these things get reported to USDA and that's the last thing you ever hear of it. Does anything ever happen?

Mark Kastel talked about big company fraud. Sure, there is big company fraud. What about fraud at the local level, where local
neighbors or maybe that we know that organic have
twice the corn meal that we've had and good for
them, that's cool. They put it in their bin and
then another neighbor says, I thought this was the
organic corn, why are you holding it to a local
feed yard? Questions like that, when I hear
comments like that from people, it's like, what
are we doing to please ourselves. Small farms can
pay for the audit, the supplies audit that would
just be the yearly inspection of the year. I'll
substitute it in that way.

It would be more of a surprise
inspection than a planned inspection. If I know
you're coming, I know I better have my paperwork,
but what about 3 weeks earlier? Maybe that's a
good time to show up. I've heard of guys telling
corn out of the organic vignette, I went over that.
Kiki talked about organic seed. I've been told
to wait longer to order my seed, that way I have
to buy non-organic seed because the organics seed
available this year, $40 organic soybeans, buys
a lot of $40 seeds. Years ago an organic producers
spread his corn with 2,4-D, nobody will ever know.
Well, how do we catch those guys? I see my time
is about out, guys. I do respect you guys. Keep
up the good work and it's kind of cool except the
May and October meeting times don't coincide with
our planting and harvesting.

CHAIR POWELL-PALM: Thank you. Thank
you so much, Tim. I hope you understand how mutual
the respect is. We really appreciate your insight
and taking the time to speak with us today. Any
questions from the board for Tim? I have one.

As a long time organic farmer, what
would you say is, how would you describe the
difference between organic farming as far as its
ability to enable a resilient business, a resilient
farm? And compare that, contrast that with
conventional farms who are looking at shocks to
their supply chain, shocks to their systems, say
in the fertilizer realm. What's the fundamental
difference that you see between organic farming
and conventional farming?

MR. CADA: This year and a few years ago when corn hit $7, I asked myself why I am organic farming? I know why I'm organic farming, but my income has been the same as my neighbors. It had always kind of kicks me off. I go through more work. We looked for a little bit more money as if we're more proud of our crop. We know that it's going to Clarkson specialty grains or to free those or to Clarkson grain, you know, wherever, we know our product is ending up.

We bought 80 acres across the road this year. My one son says no, I'm going to farm it conventional, dad, because I can get $6 corn. Well today corn is $8.25 I believe at the local corn plant. And he says, we'll switch it to organic after that, it's easy money. Now, and then he says good thing I don't need any 11520 because I can't afford it this year. So the fertilizer costs are hitting the young guys, you know, pretty hard. And he's saying, next year we will put it into
falcon. We'll sort of -- we're going to transition.

CHAIR POWELL-PALM: Okay. Do you think that there's something that is missing in our industry to keep organic as a more obvious choice for long-term investments by producers?

MR. CADA: Do you remember 3 or 4 years ago, successful farming had to meet your new boss and it was a mother and her child on it. An acres (phonetic) conference was held in Omaha that year, since it was Omaha, I guess, I better go. And I believe Gary Zimmer was up talking. And at the end of his talk, he brought her up on that screen, says, look at your new boss and my hair just stood up because I was thinking the same thing.

You know, as a soybean producer, we don't have to pay check-up on soybeans. I call into Missouri to get my exemption as usual. And finally, after all of these years, I told the gal I'd like my money back because you really don't do anything for organic. And lo and behold, her
answer was, well, what do you think we're going
to get all our food from? The thought process is
changing with our younger people and it's kind of
cool to see. My 21-year-old son wants to farm now.
He says I want to keep it organic, dad, because
it's the way to go. Young kids are seeing, it's
working. And besides that, the Roundup doesn't
taste very good.

CHAIR POWELL-PALM: Thank you, again,
so much. Amy, I saw your hand go up. Did you have
something real quick?

MEMBER BRUCH: Oh, sure. Thank you,
Nate. Thank you, Tim. I know you're a busy guy
being farming season here in Nebraska. I just
wanted to ask you the question, you were talking
about just kind of transparency a little bit. One
of our agenda items is kind of the verification
keys. Do you think it would be worthwhile for
acres and products, acres and crops, if you will,
to be placed on the organic certificate of each
producer?
MR. CADA: That's the way OneCert used to do it and then they changed it. I believe they changed it. I can't say for sure. I just don't remember. But the acres are a pretty good deal because if I have the same inspector as my neighbor, and my neighbor has 200 bushel of corn and I have a 100 bushel of corn, you better be going like what's the difference there. It's got to be, there is an issue. Acres, yes. I don't have a problem with that as long as the yields are closed, you know, 140 or 160 bushel of corn is fine. But if you come up with 220 organic corn in dry land, something is wrong, if nobody else has corn as that much, you know. There's a lot of things to look at there, Amy, it is concerning.

MEMBER BRUCH: Okay.

CHAIR POWELL-PALM: Thank you, Tim. Really appreciate your comments and your time today. And thank you, Amy, for that question.

We're going to go on to Jill Smith, followed by Dave Chapman and then Gwendolyn Wyard.
Jill, all yours.

MS. SMITH: Okay. Hi, everyone. I'm Jill Smith, Executive Director at the Western Organic Dairy Producers Alliance. Some of you know us as WODPA. And I'm also an organic producer out in Eastern Washington. So, first I'd like to thank you guys for the opportunity to provide comments on behalf of WODPA today and thank all of you board members for your service to the organic community. I'd also like to express my appreciation for you guys standing by as we work towards a final rule on origin of livestock. Your support was unwavering overall those years.

So, 2022 has brought some wins for organic dairies. I'd briefly like to share the enormous battle we're experiencing across the West. And that battle is to actually stay in business as an organic dairy. As I pulled producers with questions about materials for livestock and other NOSB issues, I was overwhelmingly met with greater concern about
making ends meet and what the future looks like for their dairies. I'm concerned that we're facing a new landscape. And it's a landscape that includes fewer small to mid-scale size organic dairies with a declining costs combined with buyers, droughts, flooding, you name it, and our milk prices staying stagnant for years. This looks to be possibly a disastrous time for organic dairies in the west.

And there's a trickle-down effect that comes along with that, that impacts our entire organic community. On the home front we face the myth that organic producers make more money because organic products sell at a premium price. Yet we've remained far from achieving a fair living wage for our dairy producers. And these producers provide year round jobs within our rural communities, buy the organic feed crops, purchase inputs locally and from our manufacturers within the broader organic community as well as by providing byproducts such as manure that's used
in crop production.

And I realize I'm straying from comments on other specific issues that we're addressing today. But I share this because I think it affects all of us within the organic community.

In addition, we're in desperate need of data and transparency in our milk market. As producers are faced with making these tough decisions on their operations, especially given our current environment, they find little to no information to make decisions on the future of their dairy.

I'd encourage USDA to consider how they can provide help in this area and show greater regional information.

With the questions on supply chain traceability, I do believe we should include crop reporting with those acreage for those pieces of the farm, excuse me, that are dedicated to pasture and the number of cows as this is essential to verifying pasture compliance or pasture compliance being met, pardon me.
As stated in my comments, we support the relisting of the livestock materials under consideration, and I largely heard that now is not the time to limit the tools for organic dairy producers. After listening today, there are some things I wish I could comment. At this time I'll thank you for your service and the chance to provide comments on behalf of WODPA. And I'd be happy to answer any questions you have on substances or anything else that I didn't get to today and make comments and get it covered very well.

CHAIR POWELL-PALM: Thank you for your comments as well as for all the work that WODPA does.

MS. SMITH: Thank you.

CHAIR POWELL-PALM: Do we have any question from the board? I have a quick one for you, Jill. When we look at this question of farm viability, and this is a question we ask ourselves across the entire nation. It's not really regional specific. What besides, I guess, outside
of NOSB, it seems like we have a lot more tools for addressing this question of farm viability. Be it co-operative marketing, supply control, other avenues we have to try to figure out how do you shore up these family instances (phonetic).

Do any come top of mind for what the biggest thing the organic community should be looking at? I think as NOSB and as a community we often find ourselves very much in the weeds about materials, very specific questions on practices. But the big picture, could you kind of bring us to a higher view for what we can be doing and thinking about?

MS. SMITH: Well, I think one thing we have to think about when it comes to organic products is looking at the true cost of production. And being paid based on that cost of production versus just having a price dictated to us without taking that information into consideration, I think that's a huge piece to it.

And I think we've heavily, in the past couple of years, relied on programs which nobody
wants to do. But if these programs are going to be out there, than we also need to ensure that they have organic specific accommodations. And very few of them actually apply to the smaller producers, you know, I was part of the conversation where it was thrown out that there were so many programs or 50 some programs that apply to dairies.

But when you look at that, you know, we're smaller typically than the dairies that are producing a huge amount of milk. And they don't work for us, you know, because we're not big, huge dairies with big volumes and that sort of thing.

So, we need help in that area too to get things that are specific to organic and organic dairy, especially as we see conventional milk prices being at record highs, you know. So, those programs don't work the same way for us. And, you know, even one of the latest programs that came out, comments were sent back that we had to look at hauling our cattle to forage, not just the freight on feed that we're bringing in, but the
expenses that we have as we move cattle to pastures
and that sort of thing, whether it be Heifer's Dry
Cows. But we have to look at those added expense
as well. So, we need some organic consideration.

And I think another huge concern I have is that
regenerative may take over regenerative organic.

And can we be lost in that shuffle, you know, how
does organic set itself apart, so it's not lost
in that regenerative movement.

CHAIR POWELL-PALM: Really appreciate
that. Yes, unified messaging. I think we're
hearing that a lot. Thank you for your comments
today. Appreciate your time.

MS. SMITH: Okay. Thanks.

CHAIR POWELL-PALM: Next up, we're
going to have Dave Chapman, followed by Gwendolyn
Wyard and Johanna Mirenda. Dave, floor is yours.

MR. CHAPMAN: Okay. I'm trying.
There we go. Okay. Thank you very much, Nate.

Hi, everybody. Dave Chapman. I'm a long-time
organic farmer from Vermont. And I'm also
Co-Director of the Real Organic Project.

And I want to speak today about a recent NOP action on one of the hot issues that organic certification is facing. A number of certifiers have stated that they will not certify chicken porches or CAFOs, even though it is allowed by the National Organic Program. CCOF is one of those and they've been given the investing and integrity award for many years at the same time insisting that they will not certify these operations.

We're facing several challenges. They're defining practices of organic farming that had been abandoned by the USDA these days. And it creates tremendous turmoil in the organic movement. There are also a number of certifiers who refuse to certify hydroponic production as organic. And that's what I wanted to mention. One of the most vocal of these is OneCert. And they were recently issued a noncompliance by the NOP. It was suggested that they, if they would just say they lack the administrative capacity to
certifier hydroponics, all of it would be forgiven. But they didn't, because they didn't, it wasn't true. They just didn't believe that certifying hydroponics was legal based on their understanding of OFPA. So they were awarded a non-compliance which has been put on hold pending the outcome of the lawsuit.

Few things. The NOP tolerates or even celebrate certifiers who refuse to certify CAFOs, but they punish certifiers who refuse to certify hydroponics. OneCert's non-compliance was about obedience, not about bad action or behavior. It was not based on their certifying an undeserving operation. Well, other certifiers are doing the same thing. OneCert is the one being called out, which makes it look as if OneCert has been called out to serve as an example to all and instill some fear into the many certifiers who are not certifying hydroponic. The majority of certified farms in America agree with the position taken by OneCert and virtually all other countries in the
world agree with OneCert. So, this is an example of the USDA redefining organic to suit certain corporate interests.

The thousands of organic farms that do not believe that hydroponics should be in the organic program will not quietly stand by while those certifiers known and respected for their high levels of integrity are punished. Thank you very much.

CHAIR POWELL-PALM: Thank you very much for your comments, Dave. Do you have any questions from the Board?

Seeing none, I will pose a similar question to kind of the theme of the afternoon. I live in rural America as many on this call do. I cannot find any organic food in many of the grocery stores which I shop in. What do we do to make it so that we can all realize access to organic foods? I guess, actually let me phrase it a little different. With your concerns about all the different production practices, why don't we see
the market flooded with organics? Why is it still
5 percent of the market, 1 percent of the land,
if it's so easy to have these practices that you
say just be not necessarily in the spirit of OFPA?

MR. CHAPMAN: Yes, it's great
question, Nate. I appreciate you asking it. You
know, the EU has got 36 million acres of certified
organic land and the U.S. has about 6 million acres.
And we have greater organic sales than they do,
not by much. They're keeping up pretty closely.
And the amazing thing about that is that they don't
certify hydroponics and they don't certify CAFOs.
So, I would say they're doing this with a much
higher level of integrity, which I think is going
to help their program grow faster, even though it
costs more. Undoubtedly, the large CAFOs are
making a cheaper product that is being called
organic and so are the hydroponic producers making
a cheaper product. That is part of the problem.

But if we look at the EU, we can see
that that has not limited the growth of the organic
program. The other big thing that I think to look at in the EU is there's tremendous support from the governments for organic, real support. It goes far beyond what the USDA is doing. And they're working on training and education and research. They're not subsidizing it. Well, they're not subsidizing the terms of making the food cost cheaper, but they are, for example, subsidizing organic certification. In Denmark, it's entirely free to be certified to organic. The government carries that Bill. And I think our government should. And at the very least, I promote my dream of having any farm that grows is less than a quarter million dollars, get free certification. And I hope you all fight for that in the next Farm Bill because we should have that.

CHAIR POWELL-PALM: Thank you for that call out to Farm Bill, where a lot of good work for organics should happen. And thank you for your comments today, Dave.

MR. CHAPMAN: Thank you, Nate.
CHAIR POWELL-PALM: Next up, we have Gwendolyn Wyard, followed by Johanna Mirenda, and then Cynthia Smith.

MS. WYARD: Okay. Can you hear me okay?

CHAIR POWELL-PALM: I can.

MS. WYARD: All right. Now, give me just a moment here and I will get started. All right. Well, good afternoon, NOSB members, NOP staff and organic stakeholders in the virtual gallery. My name is Gwendolyn Wyard and I'm Vice President of Regulatory and Technical Affairs for the Organic Trade Association. I'm commenting today on behalf of over 9,500 organic businesses across all 50 states and our missions to protect and promote organic with unified voice. My comments will address excluded methods terminology, the critical role of increasing organic seed usage and the importance of staying engaged in the rulemaking process from the beginning to the end.
On excluded methods, OTA is in full support of the subcommittee's proposal and we urge NOSB to pass it as written at this meeting. In our written comments after we state our support, we go on and we talk about the importance of organic seed usage and its connection to this proposal. As Kiki Hubbard discussed earlier, organic operations are obligated to ensure non-organic seed is in fact produced without excluded methods. But this can be a challenge since its production falls outside of the organic certification and oversight system. So, the answer is more organic seed as a requirement.

It's OTA's long time position that our best option for success is to focus on regulate organic seed and put our energy into the development of organic seed production and organic seed breeding. Organic not only helps keep GMOs out of organic, but it is the fundamental starting point in building a thriving and resilient climate organic smart system. To this end, we want to see
USDA prioritize the 2018 NOSB recommendation that updates the organic regulations to require increased organic seed usage over time.

We want to thank NOP for requesting feedback from stakeholders in a federal register notice earlier this year, and for sharing how to, I'm sorry, prioritizing upcoming standards development and for sharing its current thinking on the outstanding NOSB recommendations. Because only now can we really understand that NOP is not prioritizing the recommendation on increasing organic seed usage because they believe it's already addressed by the organic regulations. This is important information to understand. Given this, we were able to bring forth important history and explain that NOSB initially recommended increased organic seed usage in guidance, but NOP explained to NOSB that their guidance exceeded the regulations and that if NOSB wanted to recommend continuous improvement, the regulations would need to be revised. Thus the
2018 recommendation, that's not being prioritized. Unfortunately, the NOSB process and key information that informed the recommendation is not carried forward or maintained.

So, here's the moral of the story, the called action standards development that begins with NOSB, does not and should not end with NOSB. When a recommendation is passed by a decisive vote, then we need to stay engaged, carry the NOSB record forward, and be active in each step of the rulemaking process. And we need to be provided with that opportunity. We need to insist that USDA regularly update stakeholders with the status, decision criteria and current positions on NOSB, recommendation and advance rulemaking in a transparent and fair process. Thank you.

CHAIR POWELL-PALM: Thank you very much for your work and your comments today, Gwen. Any questions from the board?

I appreciate how elevated the discussion of organic seeds is becoming. I think
there's a lot of opportunity for organic farmers as we talk about markets. If organic growers are being given the chance to grow organic seed, that's also something that we realize as revenue retained for the organic community. And I think that's something that's just one of the many benefits as we dive deeper into this. As always, appreciate you, Gwen, and we will keep going.

All right. Thank you. Next up is Johanna Mirenda, followed by Cynthia Smith and then Guigui Wan.

MS. MIRENDA: Hey, good afternoon. I'm Johanna Mirenda, Foreign Policy Director for the Organic Trade Association, OTA. The Board is working on 2024 Sunset Review, as background for new board members. We create electronic surveys each year to help facilitate a thorough comment and review process. (Audio interference) available to every NOP certificate holder and measure the necessity of each material under review. We ask about alternative to the material,
impact with the material or to be prohibited and
the rating of the overall necessity from 1 to 5,
with 5 being critical, would leave organic without
it. Our comments include survey responses we
received up to the comment deadline and a bunch
more of comments that will continue to get the word
out on these materials, collect responses
throughout the spring and summer and provide
updated data to you through the open docket in the
fall, so stay tuned.

On highly soluble nitrogen fertilizer,
OTA does not support the crops subcommittee's
proposal. Many of the concerns that we identified
in our fall 2021 comments remain unresolved. And
we're concerned that the proposal overburden these
farmers without meaningful benefit. The
proposal, to my understanding, would only be
effective to restrict 1 and any other yet to be
known novel nitrogen sources that might have
similar compatibility issues as ammonia extract
and sodium nitrate, which we already dealt with
Yes, every farm would be implicated and responsible for demonstrating compliance. This approach does not address what we see as a major underlying issue, which is to find the solution for proactively identifying incompatible natural substances and getting them in front of the board for review instead of waiting for individual petitions after commercial proliferation of those products. In fact, the proposal would circumvent the NOSB review of novel substances and give them an automatic 20 percent allowance. So we still need a proactive solution. We shared some ideas last fall and we'll be happy to continue exploring these options like improving the feedback loop between the certifiers, material reviewers and NOP when a material is flagged for a compatibility concern and bringing MROs under NOP accreditation to improve oversight of input approvals.

NOSB decisively passed recommendation last fall to prohibit stripped ammonia and
concentrated ammonia. And we still support those NOSB recommendations as we stated in our comments last fall. In the fifth year of transparency and accountability, we respectfully request that USDA advances those recommendations through the rule making process without delay taking the next step to a proposed rule and comment period will allow further analysis, the opportunity for the public to lay in and answer questions and provide information to USDA.

And as my colleague, Gwendolyn, just mentioned, USDA need to provide this opportunity to carry forward decisive NOSB recommendations in a transparent and fair process and we as stakeholders then ready to continue engaging in the process at each step.

CHAIR POWELL-PALM: Stunning timing, excellent work. I think we have question from Brian for you.

MEMBER CALDWELL: Thanks, Johanna. I was struck by your comment, your written comment
that the high nitrogen materials would require a whole bunch of extra paperwork and review from every farm for every crop probably, you know. But I don't understand why that would be if there's a very limited number of materials, you mentioned, I think, two, either one or two that fall under this. And what if a farmer just check a box saying no, I don't use any of these, and then it eliminates all of that works. So, I just would like to hear how you folks are thinking that this would play out because I --

CHAIR POWELL-PALM: Oh, Brian, you're on mute.

MEMBER CALDWELL: Did you catch the end of what I had --

MS. MIRENDA: I think so. Just how to respond to the documentation requirements for producers given that the proposal only addresses a narrow scope of material?

MEMBER CALDWELL: Yes. And, again, that it seems like, you know, the farmer can just
check a box saying, yes, I don't use these things and then move on.

MS. MIRENDA: If it were that simple, it could certainly minimize the documentation burden. However, given that the regulatory language is specific to the crop, to carbon to nitrogen ratio. And that data is not readily accessible to producers. There will have to be a process for every farmer to go through, an analysis of their own organic system plan and make a determination of whether or not they should have check that box or not.

But having readily available information to producers is the first step. And then given the narrow scope of material that this proposal would impact, you know, we want to see the recommendations from last fall to prohibit ammonia extract move forward. That would be a prohibition. So, excluded from being impacted by this 20 percent regulation.

Also given the sodium nitrate
recommendation from last fall, which would address the 20 percent on sodium nitrate, it's still a very limited number of materials, in fact only one is identified in the proposal as being impacted, guano. Therefore, the bang for the buck that this proposal would deliver is very minimal and still doesn't address what we want to see in terms of proactive flagging of incompatible materials and getting them in front of the board. So, we weigh the pros and cons of this proposal and still feel that there is unmet need to identify potentially incompatible non-synthetic materials and get them in front of your review. And there's no assumption that we want to make that any potential non-synthetic should get that 20 percent because we saw with ammonia extract that a full prohibition is what the board determined was appropriate.

MEMBER CALDWELL: Yes, good. Thanks. But if we just take it one step further, I mean, the magnitude review organizations need to basically approve any substance that we're using
as a fertilizer anyways. So, why couldn't they just be the kind of the clearinghouse of making the determination as to whether a particular substance had a C to N ratio of less than 3:1? And, again, you know, if I'm not using any of those, I just check the box and move on. It seems like with a little bit of effort, we can figure out a system that will address this, you know, burdensome paperwork issue.

MS. MIRENDA: Yes, I think in order for this proposal to be effective to what they buy-in from material reviewers in order to communicate the carbon to nitrogen ratio for operators to readily demonstrate compliance. Even so, we're left without a proactive way to flag potential novel, non-synthetics that have compatibility concerns to get this in front of this board for review.

So, say this passes, then what? How will we prevent the learning moment from last fall where the board was voting to prohibit material
impacted by the concentrated ammonia position that
had been only listed for 10 years? The problem
that will not be solved by the proposal.

MEMBER CALDWELL: Thank you very much.

CHAIR POWELL-PALM: Any other
questions for Jo? I have a question, Jo, that I
meant to ask Gwen as well. So, I'm going to put
it all on you to answer.

You live and breathe organic every day.

What are we missing about getting our markets to
be the norm, that 50 percent or we really have
everyday organic products available across the
board? And organics isn't niche at all. What do
we do? What are our barriers and how do we overcome
them?

MS. MIRENDA: Man, you're not going to
ask me a question about the National List.

CHAIR POWELL-PALM: I might get to
that, but.

MS. MIRENDA: It looks like this and
say, we need organic specific technical assistance
for every acquiring organic farmer everywhere, especially underserved communities, geographically isolated communities, we need Federal policy for crop insurance to not just incentivize organic producers and transiting producers. We need concentration programs to acknowledge and reward organic producers for practices they are employing. A lot of the answers fall outside of this board, which makes it even more of a herculean effort beyond what we have here.

So, I really encourage the direction the board is going with looking at work agenda topics beyond the National List because we need big solutions beyond the organic regulations themselves to really breakthrough.

CHAIR POWELL-PALM: Appreciate that.

Okay. Now, a little bit of National List talk. Could you give me an example of a prohibited natural that is not, say, arsenic, something that's been dealt with before that would sort of put into context where ammonia extracts would land?
MS. MIRENDA: Well, I think the only update to the prohibited naturals list since it was first developed and the original National List was rotenone. I think that's been the one update.

But what I have been looking to as an example for this scenario with ammonia extract is natamycin because it's not totally prohibited, but it was a non-synthetic that was started with a petition, resulted in an NOSB recommendation to prohibit.

Went through the rulemaking process even though it was really messy, but that act of advancing the NOSB recommendation to the proposed rule, getting that opportunity to take broader stakeholder comment, engaging with other federal agencies as appropriate and required by OFPA and then the USDA explaining their rationale in the Federal Register in their final decision. That's what we need to make regular everyday practice for NOSB recommendations, period. That's the USDA keeping up their end of the public-private partnership.

So natamycin is an example of that model of
advancing it, even if its messy, you've got to, you owe it to stakeholders and this partnership we've created to keep it moving.

CHAIR POWELL-PALM: Thank you very much for that. Yes, I think that's to honor at this time everyone's putting into this process. I think there's a lot of debate for that.

MS. MIRENDA: Yes, and what we do not want is NOP making decisions or pre-committing to not following through with rulemaking without that public and transparent process.

CHAIR POWELL-PALM: Thank you. And thank you for your comments today. Next up, we have Cynthia Smith followed by Guigui Wan and then Amber Sciligo. All right. Floor is yours, Cynthia.

MS. SMITH: Okay. Thank you. My name is Cynthia Smith. I'm a partner with Conn & Smith Incorporated, which is a pesticide registration consulting firm. I'm here representing Ingevity Corporation. And I'm here to speak in support of
distilled tall oil.

Next slide, please. FIFRA is the act that regulates pesticides. It clearly defines active ingredient and inert ingredient. The definition for inert ingredient is very simple. It's the ingredients that are not active ingredients.

Next slide, please. EPA issues tolerance exemptions for both active ingredients and inert ingredients. In 2004, which was the last year that EPA issued a list for the inert ingredients, distilled tall oil was on the list of three. And that was because at that time it was considered to not have a complete toxicological database. However, in 2017, EPA did issue the tolerance exemption for distilled tall oil. And that tolerance exemption one demonstrates that distilled tall oil has a complete toxicological database. And two, that it has a complete EPA safety assessment. And three, that that safety assessment shows that it does meet EPA's current
high safety standards. If EPA were updating the list at this point, then it would be on list 4B. And we do know that Canada, unlike the United States, does update its list periodically and distilled tall oil is on Canada's list 4B and it is organic in Canada.

Next slide, please. This slide show the contents of the register notice, having to do with distilled tall oil. The thing that's important here is that distilled tall oil is allowed for used sample of crops and animals. And in both cases, the clearance is for an inert ingredient.

Next slide, please. The Organic Food Production Act regulates the use of synthetic substances in organic agriculture. It establishes the criteria under which synthetic substances can be used. It does not differentiate between synthetic pesticides, active ingredients and synthetic inert ingredients. The same criteria apply to both active and inert
ingredients, the same methodology applies. There's no new science that is needed to evaluate the distilled tall oil petition.

Next slide, please. The petition for distilled tall oil has already been pending for 20 months. That petition goes into great detail about how distilled tall oil meets all the criteria of the Organic Food Production Act. We've also submitted additional documentation to address the errors in the technical report. Right now it's delayed. Okay. Thank you.

CHAIR POWELL-PALM: Thank you for your comments. Appreciate them. Any questions from the board? Wood has a question.

MEMBER TURNER: It's actually a question for you, Nate, or Michelle. Michelle, would these summary slides be available after this session?

MS. ARSENAULT: I can send them to you and they will be posted in the docket with the comments.
MEMBER TURNER: Thank you.

MS. ARSENAULT: You're welcome.

CHAIR POWELL-PALM: Brian, go ahead.

MEMBER CALDWELL: Yes, thanks, Cynthia. You mentioned in the beginning that basically materials, either an active ingredient or inert. But I thought that tall oil could be both, either an active ingredient or an inert ingredient depending on how it was used.

MS. SMITH: That's a false statement that came about from the original technical report and then was reported again in the second technical report. So, it's very clear, distilled tall oil is exclusively an inert ingredient. And the next speaker, Guigui Wan, will get into some of those details.

MEMBER CALDWELL: Okay, great. Thank you.

MS. SMITH: And if I can speak very briefly to Nate's question, if you'll allow me, in a minute.
CHAIR POWELL-PALM: Oh, sure. Which question was it?

MS. SMITH: About how do we grow from 5 percent to 50 percent?

CHAIR POWELL-PALM: Please.

MS. SMITH: Yes, the inert ingredients make the active ingredients work better. And if you can think about your house, if the value of your house was frozen in time at 2004, you know, your house is worth well more than what it was worth in 2004. That's where we are in the development of products for use in organic agriculture. We're stuck back in 2004. If you look at the many comments submitted in support of the distilled tall oil, you will see that there is a strong need for additional inert ingredients to make your current products work better. If you have better working products, you'll have more organic growers.

CHAIR POWELL-PALM: Appreciate that.

MEMBER PETREY: Yes. I threw my hand
up. That was interesting thing that you say, so, yes, a lot of people have discussed the concern of adding inputs to the National List because of getting away from the nature of organics and from OFPA. But I think that we do need to consider, there can be an innovative new inputs that come on and they could be better than what is currently on the list. And would you agree that we need to focus more on the OSP, which actually, you know, is in the OFPA to say that each farm or each organic producer must follow the OSP and that is overlooked by the certifier to make sure that they are following those standards? Would you agree that that actually is probably should be looked at more or just to make sure that, you know, producers are following that instead of limiting inputs that come onto the list.

MEMBER SMITH: Yes. Can you define OSP for me?

MEMBER PETREY: The Organic System Plan?
MEMBER SMITH: Okay.

MEMBER PETREY: So, as an organic farmer, I have to list everything that, you know, that we're doing and including crop rotations and cover crops, things like that to make sure that our certifiers agrees that we are acting within OFPA.

MEMBER SMITH: Well, I would say that, again, there is a profound need for additional inert ingredients for formulation of products for the organic agriculture. And we've made the point in the petition that we have satisfied all of the requirements. Nonetheless, let's say the hurdle to get there is very high. So, I think it would be beneficial for the board as a whole to evaluate what can the board do to facilitate the availability of additional organic products that simply work better?

CHAIR POWELL-PALM: I think Wood has another question.

MEMBER TURNER: Nate, I just have a
comment, to be clear, and I don't want to get into a debate about this, but to be clear, the hurdle should be high for materials that are being petitioned for use. So, I just want to say, in comment to this statement you just made about the high hurdle. It should be a high hurdle and that the process is playing out the way that it's designed to play out. And so I just want to make that comment.

CHAIR POWELL-PALM: Appreciate that. And thank you for your comments today, Cynthia.

MEMBER SMITH: Thank you.

CHAIR POWELL-PALM: Going forward, we have Guigui Wan followed by Amber Sciligo and then Angela Schriver. Guigui, the floor is yours.

MS. WAN: Thank you, Nate. Can you hear me good?

CHAIR POWELL-PALM: We can.

MS. WAN: Okay. Thank you. Good afternoon. My name is Guigui Wan. I work for Ingevity as the Technical Product Lead. And today
I'm speaking here to support the Distilled Tall petition.

Next one, please. So, although if you place a bottle of soybean oil next to a DTO, I mean, both have amber and oily appearance. So, they look quite similar, but actually they're very different materials. So, historically, I mean, DTO is often mistaken to be an oil because the word oil in the name. But as a matter of fact, DTO is not an oil by the structure or the function. DTO is primarily composed by natural occurring fatty acids and rosin acids while soybean oil and other vegetable oils are triglyceride acids.

Next one, please. So, oils as example, soybean oil are commonly used as insecticide because of its low surface tension. So, meaning they can spread evenly and easily insect and suffocate the insects. But oppositely DTO has much higher surface tension and are very comparable to the surface tension of water. So, imagine a drop of water on leaf surface. It doesn't spread,
it balls up. It's just really above water. This is what happens if you spray a DTO on leaf surface. So, fundamentally DTO cannot function as insecticide. In addition, the recommended use rate for DTO is much lower than soybean oil or other oils used as insecticide. At such low use rate, DTO can only function as inert.

Next one, please. So, just like olive oil and neem oil, all the components in DTO are naturally derived. I mean, the difference is DTO comes from pine trees. DTO is not a pure substance. It is a UVCB, meaning it is created from biological materials naturally occurring in the environment. And it is already proven to be very safe to humans, environment in various applications. We repurposed DTO following the sustainable processes and only very slight modifications to ensure that it can be reused and can bring benefits to the overall health of ecology. If DTO was not used properly, it will be burned or put into landfill. DTO is already
used in conventional crop protection and it
demonstrates many application benefits, stated
clearly in our petition.

Next one, please. So, in summary, DTO
is extremely valuable natural origin biological
material. It is generated from material,
otherwise will be incinerated or landfilled. It
is very safe to human environment and bring many
sustainability benefits and support the overall
health of the ecological systems. And thank you
so much for the attention today.

CHAIR POWELL-PALM: Thank you very
much for your comments and joining us. Any
questions from the board? Not seeing any, we will
continue on. Thank you, again, Guigui.
Appreciate your time. We have Amber Sciligo next
followed by Angela Schriver and our last speaker
today is going to be Leslie Touzeau.

MS. SCILIGO: Great. Thanks. Nate,
can you hear me?

CHAIR POWELL-PALM: We can. Thank
you. Go ahead.

  MS. SCILIGO: Okay, great. Hi, everyone. My name is Amber Sciligo. And I am the Director of Science Programs for the Organic Center. We are a nonprofit organization that communicates research on organic and we also collaborate with academic and governmental institutions to help fill gaps in a scientific knowledge. I want to first say thank you to the materials subcommittee for all its hard work and continuous consideration of organic research needs. And while we support and appreciate the large diversity of priorities that are currently presented today, I would like to ask the subcommittee to please also include the following briefly summarized research priorities.

  First up, I have cultural and social barriers to organic adoption. We know that production challenges, yields and other economic barriers to transition are significant. And there are also lesser defined cultural and social
barriers that can prevent some farmers from using organic practices and/or pursuing organic certification, even when they have already adopted organic practices. We need more research to identify these barriers so that they can be addressed and overcome. And we recommend that priorities is specifically placed on assessing the potential societal benefits and/or drawbacks of organic certification for farmers, their communities and existing consumers and the assessment of current limiting factors to the appeal and adoption of organic certification.

Next is assessing impacts of inadvertent chemical contamination across the supply chain. We do applaud the NOSB for including the topic of prevention of GMO crop contamination, but the issue of contamination is not unique to genetically modified material. And we request that chemical contamination be included as well.

Next is the comparison of pesticides and antibiotic residues in organic and non-organic
products. We do need more research on the impacts of organic on exposure to residues and the connections between these exposures to help outcomes. And residue comparisons may be especially important for popular imported products that are grown in countries that currently use pesticides that have previously been banned in the U.S. or may have less stringent rules for pesticide application and monitoring.

Next is quantifying nutritional values of organic animal products such as dairy, meat and eggs. We were pleased to see the inclusion of factors impacting organic crop nutrition. However, the discussion focuses on fruit and vegetables, and we encourage the committee to include animal products as well.

Next is measuring impacts of organic crop production on water quality, specifically related to pesticide residues in water and how organic can keep pesticides out of waterways. And finally, we have assessing benefits and risks of
livestock integration into crop rotations. There are well-known benefits of animal crop integration and where research is needed to examine the impacts of the use of livestock for cover crop grazing, especially on ecosystem health and food safety.

CHAIR POWELL-PALM: All right. Thank you. Appreciate your comments today. And appreciate all the work the Organic Center does. Do we have any questions for Amber from the board? You must have covered it all, so appreciate it.

MS. SCILIGO: Thank you.

CHAIR POWELL-PALM: All right. Thank you for your time. Moving on, we're going to have Angela Schriver and then Leslie Touzeau as our last speaker today. So Angela, the floor is yours.

MS. ARSENAULT: Angela, I see you're just on the phone. If you don't have a mute button on your phone, you can type star six. Oh, there you go. I think you're unmuted now.

MS. SCHRIVER: Can you hear me now?

CHAIR POWELL-PALM: We can.
MS. SCHRIVER: You can hear me. Oh, thank you. All right. I'm Angela Schriver from Schriver Organics. We are members of OEFFA and OEFFA Grain Growers Chapter. On highly soluble nitrogen fertilizers, we are proponents of limiting HSN, fertilizers, carbon to nitrogen ratios to three to one with a 20 percent input limit. This limit will ensure the focus is still on soil health management and will prevent reliance on these inputs. And there's effort to maintain and improve the soil's fertility. These types of fertilizers will become unnecessary and becoming unnecessary should be the goal. And this will easily be apparent when looking at the organic management practices of a farm. We want to be sure that the NOP is not inadvertently encouraging a system that mimics a conventional ag system.

On the organic link system, we support the creation of an organic link system, a centralized database that would allow for real time traceability of transactions, import certificates
and transaction certificates as a tool for fraud prevention. And as we've heard, the current tools for fraud prevention are not 100 percent reliable.

As a farmer that is participating in a voluntary set of standards, it is important to create a level playing field for all potential participants. Additionally, I don't foresee any extreme burdens for farmers as it's just an electronic version of information that we are currently providing on paper now. An organic link system seems to be a logical extension of the strengthening organic enforcement proposal rule, which is intended to protect the integrity in the organic supply chain, which we're still eagerly awaiting the publishing of.

And timing of meetings, not only do I appreciate the opportunity to voice my thoughts and concerns on organic agriculture with the NOSB, I genuinely enjoy hearing the thoughts and concerns of others in my organic community. It is the knowledge of others that leads to my deepening,
understanding and appreciation of organic agriculture as a farmer and as a consumer. I encourage rotating the timing of the meetings in order to hear from a wide variety of producers.

General comment. Previously I commented on my concern with Harold Austin's remarks made about supplying consumers with an organic version of conventionally produced products in order to compete with the conventional market. Today, he again used the term compete. I'm unsure of why an organic farm would feel competition with a conventional farm. I would guess it is based on consumer interpretation or expectation. Based on that presumption, I would suggest prioritizing consumer education instead of wandering down the organic standards. I would also pinpoint consumer education as the key to organic agriculture's growth. I know the more educated I am on organic agriculture, the more adamant I am on consuming and growing organics.

Thank you for your time.
CHAIR POWELL-PALM: Thank you so much, Angela. Do we have any questions for Angela?

I have one. Angela, when you think about your crop rotation, you mentioned that one of the goals is to try to have more and more nutrients cycled on the farm and fewer inputs. Did I get that right?

MS. SCHRIVER: Correct.

CHAIR POWELL-PALM: Okay. And so when you're thinking about your crop rotation, do you think about that you need to get the most valuable cash crop off every field every year or do you think of it as it's some years you're feeding the soil, some years the soil's feeding you? And so it won't always be the highest value crop off every year, but this give and take to keep the soil whole?

MS. SCHRIVER: That is absolutely correct. And I would add, if I were trying to obtain the largest cash crop on every field every year, that would not be sustainable in the long-term. Would it give me a bump in income for
a year? Possibly 2 years, yes, but would I be able to continue as organic agriculture long-term without considering everything else, the soil health, the fertility, having those off years where I'm just planning a cover crop to regenerate the soils, et cetera. You know, my goal is long-term.

CHAIR POWELL-PALM: Appreciate that.

Would you mind, just anecdotally, would you tell us what your crop rotation is?

MS. SCHRIVER: Yes. So, we live in North Central Ohio, so we have had a lot of rain for the last couple of years. But generally speaking we've been doing corn, soybeans, sunflowers and then a year, our plan is to do a year of cover crops in that field. So, it has an entire year, and that could be a summer planting of cover crops and then terminating that and doing a winter planting of cover crops that'll make it through the winter. So, we're set up for corn the following year. That being said, whenever we can squeeze in a small grain, weather allowing, that
is also our goal. And we are always looking for more crops to add to the rotation as well because we know, that's just keeping our soil healthy, upping that fertility so that we can stay in agriculture long-term.

CHAIR POWELL-PALM: Thank you. I know Amy has a question for you as well.

MEMBER BRUCH: Yes, I do. Thanks, Nate. Thank you, Angela. I really appreciate your time. I know as a farmer, you're extremely busy this time of year. So, your contributions today are really important. I appreciate the comments on the highly soluble nitrogen. I wanted to ask you a little bit more on, just one of our topics for the CACS committee and you briefly talked about the organic link system. I believe you said you're affiliated with OEFFA, sorry about that, but, yes, OEFFA, sorry about that. Lots of acronyms that were thrown around today, but anyway.

MS. SCHRIVER: I know.

MEMBER BRUCH: I wanted to ask you, I
know that crops are present on your certificate as well as the products that you produce. How many of your buyers are interested in having this information? Are there several that have been asking you for, you know, just verification on your, the crops that you grow and acres that you have?

MS. SCHRIVER: Unfortunately, no, and I emphasize the word unfortunate as in sometimes even I question why they wouldn't be more concerned. I feel that, you know, we sell our crops to typically the companies buying it. As long as they have their boxes checked, they're doing the right thing, which is just the organic certificate, the bill of lading, the clean transport certificate, they file that and they forget about it. And there have been times where I have definitely thought, you would think they would be more concerned, but I also know some of these buyers are also buying, grains been imported, and it's substantially cheaper. And they should
probably question whether or not it's legitimately organic, but again, they don't. They check their boxes, so they won't get into trouble and they move on.

CHAIR POWELL-PALM: One quick follow-up question to that. Angela, you are certified by OEFFA, correct?

MS. SCHRIVER: Correct.

CHAIR POWELL-PALM: Okay. And OEFFA is one of those certifiers who does put the acres by crops on the certificate, is that correct?

MS. SCHRIVER: Yes.

CHAIR POWELL-PALM: Okay. And do you feel like there's any concern or do you feel like that works for you in your system to have that information disclosed to anyone who gets your certificate?

MS. SCHRIVER: I don't feel like I'm hiding the amount of acres I grow in anything. I'm more than happy to provide it. I would be more than happy to provide my yield results as well.
None of that information do I feel like I would need to hide from my neighbor or hide from my husband or hide from the buyer of my products. I think that is information that should be readily available to whomever deems it necessary or would, you know, even be curious to check.

CHAIR POWELL-PALM: Really appreciate your insights there. And I just want to echo what Amy said. I know it is an inconvenient time to comment, but I so appreciate every farmer and everyone, but especially those farmers who should be in the fields, taking the time to speak with us today. So thank you.

MS. SCHRIVER: We definitely appreciate all of the board's time as well. So, thank you guys as well.

CHAIR POWELL-PALM: Absolutely. All right, folks, wrapping it up. We are going to end today hearing from Leslie Touzeau and then we're going to meet again on Thursday. So, Leslie, the floor is yours.
MS. TOUZEAU: Wonderful. Can you all hear me?

CHAIR POWELL-PALM: We can.

MS. TOUZEAU: Yes. All right. Good afternoon. My name is Leslie Touzeau and I'm the Material Review Manager for Quality Certification Services. Thank you for this opportunity to provide comments to the board and welcome to new board members. I hope we all have a chance to gather in-person in the near future. Please refer to QCS' written comments for our thoughts on prop and livestock materials on this meeting's agenda.

I would like to spend my time elaborating on our comments about carbon dioxide and its addition to the National List at 205601.

We were pleased to see at the fall of 2021 NOSB meeting that the board decided to send the carbon dioxide proposal back to subcommittee in order to vote on the two proposed uses independently. However, the current proposal does not include any additional discussion of the
potential use of supplemental CO2 as a plant amendment in greenhouses and indoor facilities. The petition is requesting the allowance of synthetic CO2 to adjust water pH by dissolving carbon dioxide and water, creating carbonic acid and allowing that irrigation water to be used on crops. We understand that acidifying water does neutralize minerals and hard water and has the secondary effect of preventing scale and build up in the irrigation lines. But the heart of the petition and the proposal document is the use of carbon dioxide to adjust water pH as a benefit to the crop by increasing nutrient availability and plant health.

Carbon dioxide used to adjust irrigation water pH is similar in function to the listing for sulfurous acid at 205601J11, which is used to reduce the pH of irrigation water for saline or alkaline soils. Like sulfurous acid for water pH adjustment, synthetic carbon dioxide for water pH adjustment would fit with the listing at 205601J
as a plant or soil amendment. With the listing at 205601J as a plant or soil amendment, synthetic carbon dioxide will also be allowed for use as supplemental CO2 for crops. Currently in some organic production systems, non-synthetic supplemental carbon dioxide is pumped into the air of indoor facilities and greenhouses to improve plant growth and fruit production.

As we mentioned in our written comments, QCS supports the addition of carbon dioxide to the National List for this use, as it would be an additional tool in our producers' toolbox. However, this use is different from the proposed use as a water pH adjuster. And there is no discussion in the proposal document regarding supplemental carbon dioxide used to improve photosynthesis in greenhouses. We understand that this use is not the subject of the petition, but without a specific annotation at 205601J, supplemental CO2 could be considered a plant amendment and it would be allowed.
It seems that carbon dioxide could be used in three different ways if recommended for addition to 205601A and 205601J as an irrigation cleaner, a water pH adjuster and a supplemental plant amendment in indoor facilities. Only one use is discussed in the proposal and evaluated using off of criteria. QCS believes a thorough review process of the material is necessary and we recommend sending the proposal back to subcommittee to allow for adequate evaluation, discussion and stakeholder feedback through the public comment process for all potential uses of synthetic carbon dioxide.

Thank you.

CHAIR POWELL-PALM: Thank you very much for your comments today. Logan has a question.

MEMBER PETREY: Hi. Yes, just a quick comment. I appreciate the comment, the written comment and the oral comment, very clear, and we will take that into consideration, great
consideration. Thank you so much.

MS. TOUZEAU: Great. Thank you.

CHAIR POWELL-PALM: Kyla?

MEMBER SMITH: Hi, Leslie. I actually wanted to ask you about your comments related to highly soluble nitrogen fertilizers because I'm trying to sort of, you know, connect the dots between comments that are saying that it's going to be overly burdensome for producers and certifiers and inspectors and comments saying like just check a box. So, bear with me for just a minute, Nate. I'm sorry, but --

CHAIR POWELL-PALM: Go ahead. Go ahead.

MEMBER SMITH: Okay. As a material specialist, Leslie, I was like, oh, this is how I think it would go. A producer puts input on their inputs list that comes to the certifier, which then we would need to evaluate first because they, especially if it's a blended fertilizer, they're not going to know the ingredients and whether or
not their fertilizer contains guano or whatever else. And then we do the work, we'll call the manufacturer, get all like the ingredients to see the end ratio, all the things. And then we would probably put a restriction on that material saying there's a C to N ratio of less than three. You need to do extra documentation or whatever.

So, then they would need to then provide or, you know, verify and have documentation available. That's like in the chart, which is, are in the chart, that's in the proposal. And so does that sound like the practice that you at QCS would follow thus far?

MS. TOUZEAU: Yes, that sounds about right. I mean, we currently and I think I've put this in our written comments, but we currently, we have like a sodium nitrate worksheet that we do have producers fill out that kind of takes into account what crop they're using, you know, either if it's a single ingredient sodium nitrate product or if it's a blended product that contains sodium
nitrate, we can determine the percentage of the product that, and how much nitrogen is being contributed. But we have them provide the information about what crop, you know, what the nitrogen needs are for that crop. And then there are some calculations that we've built into that spreadsheet.

And so I think that what I've tried to convey in our written comments is that this is certainly possible. It just would require, you know, a significant more work on our part. And that doesn't necessarily mean that it should keep it from passing. But we just wanted to make sure that the board understands. And also, I think, you know, when it comes to looking at especially a blended fertilizer without a list saying, you know, sodium nitrate and guano are the two, you know, C to N ratio under three that we need to look out for. Without that list, it almost becomes like, do we need to evaluate every single ingredient in that fertilizer to determine what
the CN ratio is? Because we don't, you know, we
don't know if it's a blood meal. You know, blood
meal can sometimes be on the edge of that ratio.
And so we, you know, so then we end up having to
ask all of this additional information about a
fertilizer that might have, you know, 10, 15
ingredients and so that takes time, that takes the
manufacturer time. It takes time for us to then
get to complete the review and then get back to
the client. So, I mean, there's just going to be
additional work if that proposal is to move
forward.

MEMBER SMITH: And then that
additional work could also perhaps be moot sort
of if the producer is using it at a rate where it
--

MS. TOUZEAU: That's under 20 percent.

MEMBER SMITH: Right. Where it just
like inherently would be under --

MS. TOUZEAU: Right. Like if guano is
1 of 20 ingredients, it's, you know, a very small
percentage of the formulation. Then, you know, they would have to use, you know, hundreds of pounds of the fertilizer in order to reach that 20 percent nitrogen need. So, yes, I think that that's the balance that you all are kind of wrestling with.

MEMBER SMITH: Thank you.

MS. TOUZEAU: Yes.

CHAIR POWELL-PALM: Thank you for asking that, Kyla. And thank you for your answer, Leslie. Brian has a question.

MEMBER CALDWELL: Yes. Thanks, Leslie and thanks Kyla for leading this one. But I'm still struggling with this too, but why couldn't the material review organizations be involved in this and basically make that, I mean, so that everybody didn't have to redo it every time, make that determination for fertilizing materials?

MS. TOUZEAU: You mean like, make the determination of kind of what qualifies as a --

MEMBER CALDWELL: Well, yes, for instance if there's a blend and it's got something
in it that's, you know, below three to, you know, a 3.0 C to N ratio, flag it so that the producer knows and the certifier knows. It just seems so kind of logical and easy, but maybe I'm missing something.

MS. TOUZEAU: So, you mean like if the blended fertilizer as a whole has a CN ratio of 3 to 1 or below or individual components?

MEMBER CALDWELL: No, no, the individual component because that's what has to be evaluated. Right?

MS. TOUZEAU: Right. And so, I guess, I'm saying that, you know, according to the proposal and the information that you all provided that right now that looks like mainly sodium nitrate in guano. But there are some other materials that I think if the, you know, if the evaluation is just based on what is the C to N ratio, there are some materials that might kind of come close to 3 to 1. And so, because we don't know, I mean, we certainly know some materials are
definitely not 3 to 1, but without a kind of definitive list, so to speak, or at least some consensus amongst the material review organizations and certifiers, you know, we could be having to evaluate each ingredient and find out its CN ratio for each ingredient because we can't assume every time that a fish fertilizer or a soy hydrolysate or a blood meal or a guano, you know, unless there's a consensus that we assume that all of those different ingredients are not 3 to 1.

If there's not a consensus, then we have to constantly check to determine if, you know, if that particular ingredient being used in that particular fertilizer qualifies as a 3 to 1 ratio.

MEMBER CALDWELL: So, well, again, sorry to belabor this, but the material review organizations already have to check these materials, right? They have to do it. So, why won't this just be part of the evaluation of the material and that information written right on their certificate?
MEMBER SMITH: Nate, can I comment or should I just save this for the board discussion because I can answer Brian's question?

CHAIR POWELL-PALM: Sure. Go ahead.

MEMBER SMITH: Not all fertilizers are reviewed by material review organizations; not all fertilizers are reviewed by AMRI or WSDA. Lots of fertilizers are submitted to certifiers, and we do that evaluation for compliance.

MEMBER CALDWELL: Right. And a lot of other products too, but there's a strong reason to use a material review organization. And with NOFA New York, we have to pay, I don't know, $75 an hour for it, if our material needs special review and, you know, there's reason to do that to use the MRO, so let's do it. I don't know.

MS. TOUZEAU: And I, just a follow-up, you know, there is a kind of an incentive to use materials that are, you know, already reviewed by AMRI or WSDA. But that doesn't mean that all
producers do that. Some of them find materials that are local to them or, you know, so there's always going to be additional materials that need to be reviewed by certifiers like us. And so especially some of these more complex fertilizers that have mini-ingredients or custom blends or any of these types of materials, it's just going to require more work. For us, you know, I work for QCs, we're not a material review organization per se. We review materials for our clients.

And so it's just me and one other person doing this work for all of our, you know, 1,000 clients. And so it's something to consider that it would take, it would kind of put a bit more of a burden on certifiers. But, again, that's, you know, that's kind of a needle to thread when thinking about, you know, the benefits of the organic integrity of this proposal versus kind of the extra work, so --

CHAIR POWELL-PALM: Really appreciate that insight. We'll end today with Logan's
MEMBER PETREY: Thank you. I'll make it quick. And so when you talk about the blood meal and the fish, we've identified on the proposal that they are less than a 3 to 1 ratio. But are you saying that there may be some products that have a CN ratio that are higher 3 to 1 and will make them subject to the 20 percent and that can vary between batches or so of product. Do you find that or do you think that that is potential?

MS. TOUZEAU: I haven't been looking at CN ratios for these types of ingredients. But I do think reading through some of the public comments from some of the MROs that there was, I did see some mention of like, you know, potential for like a soy hydrolysate product to possibly have a ratio that's lower than 3 to 1 or, you know, I know that blood meal and some fish products are very close to that 3 to 1 cut off. And so there, you know, it's possible that there are some instances, depending on production, manufacturing
where they may kind of inch close to that line, which is why I think, you know, having a list or at least some consensus among certifiers, whether that's the best practice of like these are the starred ingredients. These are the things we want to look for to determine, you know, these are the things that we need to definitely check out. These are the things that we need to see what that C to N ratio is. And then if it would be subject to that 20 percent restriction.

MEMBER PETREY: Thank you. I appreciate your time.

CHAIR POWELL-PALM: Thank you, Leslie. I really appreciate you taking on so many questions right at the end here, and it is appreciated. So, thank you for your time and insights today.

Well, folks, we're going to do this again on Thursday. So, that concludes our public comments webinar for day one of the spring 2022 meeting. Thank you to everyone who provided
comments today. This is what makes our community
great. And we're going to reconvene Thursday,
April 21st at noon Eastern. So, I hope to see
everyone back here and we'll do it all again. All
right. Thank you.

(Whereupon, the above-entitled matter
went off the record at 5:18 p.m.)
The Board met via Videoconference, at 12:00 p.m. EDT, Nate Powell-Palm, Chair, presiding.

MEMBERS PRESENT

NATHAN POWELL-PALM, Chair
AMY BRUCH
BRIAN CALDWELL
GERARD D'AMORE
CAROLYN DIMITRI
LIZ GRAZNAK
RICK GREENWOOD
KIMBERLY HUSEMAN
MINDEE JEFFERY, Vice Chair
ALLISON JOHNSON
DILIP NANDWANI
LOGAN PETREY
KYLA SMITH, Secretary
WOOD TURNER
JAVIER ZAMORA

ALSO PRESENT
MICHELLE ARSENAULT, Advisory Committee Specialist, National Organic Program
JARED CLARK, National List Manager, National Organic Program
DAVID GLASGOW, Associate Deputy Administrator, National Organic Program
ERIN HEALY, Division Director, Standards, National Organic Program
ANDREA HOLM, Materials Specialist, National Organic Program
DEVON PATILLO, Acting Assistant Director, Standards, National Organic Program
JENNIFER TUCKER, Deputy Administrator, National Organic Program; Designated Federal Officer
(12:00 p.m.)

MS. ARSENAULT: Welcome everyone to the National Organic Standards Board, day two of the public comment webinar. If you're on the phone with us only, you won't see the slide that's on the screen, but I'm going to just run through the slide really quickly. We -- there's phone numbers on the screen, so if you are having audio issues and you want to drop off the video and just dial in on the phone, you're welcome to do that as well.

There's several phone numbers to choose from. We ask that you please do stay on mute. Chat is enabled and you'll find that in the center of your Zoom task bar, wherever that is on your screen.

And you're welcome to chat with each other, relay technical information or technical difficulties to NOP. But chats are not part of the public record, so you can chat with each other but the board is not going to be request -- answering questions. Sorry. And closed captioning is available in Zoom by clicking the live transcript
button or the CC button, which I can't see -- but
if you -- you can control it on your end so you
can see it or not see it as needed. You can also
change the font size. So if you click on that
button, it'll give you the option to play around
with the settings. And thank you for one of my
coworkers who just requested that I turn on the
live captioning. Please don't use the raised hand
feature, which is under the reactions button at
the -- in your task bar at the bottom of the Zoom
window. All commenters had to register ahead of
time and will be called on in turn by their board
chair.

You can customize your own view in Zoom
by going to the upper-right corner, there's a
little Hollywood squares or Brady Bunch, depending
on what generation you're from. The view button,
and you can change what you see on the screen.
We're going to pin my camera, which will be pointed
at the speaker-timer. And we'll highlight the
current speaker on the screen. But you're welcome
to change the view for yourself on your end. If
you're having technical problems, you can contact Zoom directly by going to support.zoom.us, in the upper-right hand corner of the screen, there's a contact us button and you can live chat if you need to. The webinar is being recorded and we're going to have a transcript, a written transcript, that will be available after the meeting concludes next week and it's usually a couple of weeks after that until we get the official transcript. And the transcription is on the call -- transcriptionist is on the call with us today.

For speakers, so Jared, can you move to the next -- thank you. Much faster. Speakers make sure that your name is displayed in your video tile correctly, just so we can locate you and make sure that your mic is unmuted when it comes time for you to speak. We do ask that everybody on the call please stay on mute until you're called on to comment, and then you can unmute yourself and turn on your camera if you like. It's optional. You don't have to be on camera. The mic and camera icons, widgets are on the bottom left of the Zoom
taskbar. If you're on the phone only and your phone doesn't have a mute button, you can use star six to mute and unmute yourself, it toggles back and forth. We can also unmute you from our end if you're having issues and give you a second to get unmuted before you start.

At the beginning of your comment, please state your name and affiliation for the record. That's so the transcriptionist can capture it and then I'll start the timer when you're ready to start your comments. Each commenter has three minutes to speak and we will have the timer.

I'm going to switch my camera here so you guys will see the timer. We'll start the timer and then there's a beep at the end of the three minutes. So we just ask that you please finish your sentence. And then the chair will invite NOSB members to ask questions of you at the end of your comments, so don't immediately hit your mute button as soon as you're done your comment. We -- there, may be follow-up questions. All right. I am going to turn it over to Jennifer Tucker, the deputy
administrator of the National Organic Program, so she can officially kick the meeting off. Thank you, Jenny.

MS. TUCKER: All right. Thank you, Michelle. And thank you for -- to everybody who is here today. My name is Jennifer Tucker, I'm the deputy administrator for the National Organic Program. So first a welcome to all our National Organic Standards upward members. We are continuing our fourth online meeting together. And we continue to be very, very pleased and happy to have such an engaged audience in this ongoing forum here. I'd like to particularly welcome again our new board members; they're four of them, Liz Graznak from Missouri, Allison Johnson from California, Dr. Dilip Nandwani from Tennessee, and Javier Zamora from California. And so they started their work on the board this spring and I would like to all of us practice our Zoom applause skills, so waiving two hands in the camera to thank them for all the work that they've already done and will continue to do here. To our public
cementers, again, I do want to thank you for engaging in this process, and I thank our audience, you are an important part of this process and we're glad that you're here to listen in.

This webinar continues the series of virtual webinars that are occurring over multiple days. We are in our second day this week and there will be three days next week. Meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website. Transcripts for all segments will be posted once completed. And so this meeting, like other meetings of the National Organic Standards Board will be run based on the Federal Advisory Committee Act and the board's policies and procedures manual.

I'm going to act as designated federal officer for meeting segments. And Nate Powell-Palm will continue to serve as our board chair and will take the helm for this session once I'm done here.

So as I noticed -- noted as I started the last NOSB meeting and on Tuesday and an open transparent process mutual respect is critical.
We do ask in advance to avoid personal attacks in and disparagement. Please engaged with grace.

I wanted to append that comment with just a personal observation. For folks to have given public comment in the past, you know, it can be a little intimidating, a little scary to get up for your three minutes to testify not only to the board and to the program, but to all your, kind of, peers. And so that can be -- I admire people who take that stand for those three minutes, because for many it can be -- it's a lot going on.

So I invite our audience that while we keep the chat button -- the chat active, there have done a few times, it's not just this meeting, but previous meetings where when somebody is speaking, people start sort of chatting in rebuttals or are not -- some frankly mean chats while somebody's giving a testimony. I'm going to ask that you monitor that. So monitor yourself here. So we do again, keep the chat open for people to be able to converse. But when somebody's testifying, please give them the space and the safety, to be
able to do that in a supportive way. So if you want to add a comment later on, or something that's important to you, do that. But just something to consider as a, sort of, a personal request in monitoring with the chats. So again, engage with grace and that's not only verbally, but with each other in the written form.

So I got to close by again, thanking the National Organic Program team. This is an amazing team, and I am honored to work with them every single day. This team is why I show up. This community is why I show up. That I have now been with the Organic Program for ten years. I passed my ten-year anniversary about six months ago, actually, first as associate and then as deputy. And it continues to be an honor to listen to you, to work with you, and to try to support you the best I can and to support our team the best I can. So I want to acknowledge Michelle, who I've now worked with almost ten years. Jared Clark, Devon Pattillo, Dave Glasgow, and our standards director, Erin Healy. Andrea Holm is with us and
on there are other NOP staff on the line who are listening and helping behind the scene. So I'd like to give them a round of applause as well. So thank you. I'm going to now hand the mic back to Michelle who's going to do the roll-call of NOSB members. So thank you again for being here. We appreciate your engagement.

MS. ARSENAULT: Jenny, my camera's facing the speaker timer, so I'm just going to be on audio. Nate Powell-Palm.

CHAIR POWELL-PALM: Present.

MS. ARSENAULT: And so let me just back up one second. We're just go do a roll. It's a way to check everybody's mic and camera and it's also for the transcriptionist just so you know. Mindee Jeffery.

MEMBER JEFFERY: I'm here.


MEMBER SMITH: Hi, everybody.

MS. ARSENAULT: Hi there. Amy Bruch.

MEMBER BRUCH: Morning, everybody.
MS. ARSENAULT: Good morning. Brian Caldwell.

MEMBER CALDWELL: Hello, everybody.

MS. ARSENAULT: Hey, Brian. I knew you were there. Jerry D'Amore.

MEMBER D'AMORE: Yes, and hello.

MS. ARSENAULT: Hello again, Jerry.

Carolyn Dimitri.

MEMBER DIMITRI: Good afternoon, everyone.


MEMBER GRAZNAK: That's all right. Yes, I'm here. Good morning.


MEMBER GREENWOOD: Yes, I'm here.

Good morning.

MS. ARSENAULT: Good morning. Kim Huseman.

MEMBER HUSEMAN: Good morning.

MS. ARSENAULT: Hi, Kim. Allison
Johnson.

MEMBER JOHNSON: Good rainy morning from California.

MS. ARSENAULT: Always good to hear, Allison, sorry. Dilip Nandwani.

MEMBER NANDWANI: Good morning.

MS. ARSENAULT: Good morning, afternoon, good day. Logan Petrey.

MEMBER PETREY: Hi, good afternoon, everybody.


MEMBER TURNER: Here, good morning.

MS. ARSENAULT: Good morning. And Javier Zamora?

MEMBER ZAMORA: Here. Buenos dias a todos.

MS. ARSENAULT: Hello, Javier. Welcome. All right. Nate, I am going to turn it over to you.

CHAIR POWELL-PALM: All right. Welcome to day 2, everybody. Just a reminder that
there is a policy in the policy and procedures manual about public comments. Bear with me. So all speakers who will be recognized, signed up during the registration period. Persons must give their names and affiliations for the record at the beginning of their public comments. Proxy speakers are not permitted. Individuals providing public comment shall refrain from making any personal attacks or remarks that might impugn the character of any individual. And I just wanted to give a bit of a shout out that I thought we did a pretty good job with this on day 1, so thank you, everybody. Members of the public are asked to define clearly and succinctly the issue they wish to present before the Board. This will give the NOSB members a comprehensive understanding of the speaker's concerns. I'll call on speakers in the order of the schedule and we'll announce the next person or two so they can prepare. Please remember to state your name and your affiliation, and then we'll start the timer. Board members will indicate to me if they have any questions and I'll
call on them. Only NOSB members are allowed to ask questions. So to get us kicked off, our first speaker is going to be at Lynn Coody, followed by George Szczepanski and then DeEtta Bilek. So Lynn, the floor is yours.

MS. COODY: Okay. Nate, do you want to test the speakers so everybody can hear it?

CHAIR POWELL-PALM: Oh, yes. Let's hear that beautiful chime to know when we're done. Please, go ahead.

MS. ARSENAULT: One moment, Lynn. Sorry.

CHAIR POWELL-PALM: Thank you, Lynn, for your patience.

MS. ARSENAULT: Let me count down just a few seconds here. Can folks hear that?

MS. COODY: Yes.

MS. ARSENAULT: All right, Nate. Okay. All yours, Nate.

CHAIR POWELL-PALM: All right. Thank you, Lynn. Please go ahead.

MS. COODY: Okay. Thank you. Good
morning, everyone. My name is Lynn Coody and I'm presenting comments for the Organic Produce Wholesalers Coalition, seven businesses that distribute fresh organic produce across the United States and internationally. In our comments with the NOSB, we express our own ideas and provide a conduit for the voices of the many certified growers who supply our businesses. I'll address the risk mitigation table, and highly soluble nitrogen fertilizers. OPWC views impartiality provision as the basis for ensuring fairness and due process for all participants in any oversight system. We found the NOP's table focused primarily on conflict of interest issues. But since impartiality is centrally important to implementation of oversight systems, we assert that analysis must address, not just conflict of interest, but all elements of impartiality contained in the three main references for the NOP accreditation program. Topics such as risk of bias in each of the accreditation process. Considering pressures arising when an
accreditation body also functions as a standard setting body, and need for thorough analysis of risk and residual risk. Responding to the sub committees questions about elements that may be missing or need clarification, we focus on analyzing documentation of the impartiality provisions of one of the main references underpinning and NOP's accreditation system, ISO 17011. Our varying comments detail significant missing elements and topics needing clarification.

HSN, after careful analysis of the proposal to regulate these fertilizers using a standard based on the C to N ratio, we concluded that the concept is too imprecise for practical application as an enforcement tool. Additionally, we found the concept burdensome in its requirement for calculating contributions of nitrogen from both materials and practices against an imprecise estimate of a crop's nitrogen needs. Here's an example of the impacts on organic produce growers. The starting point for concern
is the need for crop-specific guidelines for nitrogen requirements. This is a heavy lift for the produce sector in which small and mid-size farms are renowned for the wide variety of crops grown, each of which would require development of a region-specific guidance about its nitrogen needs. Yet, using information from the proposal, we see multiple technical difficulties in determining the basis for organic systems. First, the base rate of nitrogen need is expressed as a range not there's a definite target. Second, the nitrogen need varies with management practices such as tillage or inter-cropping. Third, prior crops increase or decrease the nitrogen need of the current crop. And fourth, cover crop greatly impact nitrogen needs yet vary in the amount of nitrogen they contribute, making their impact very difficult to quantify without analytical soil testing. Thank you for the opportunity to comment on these topics.

CHAIR POWELL-PALM: Thank you so much for your comments. Brian has a question.
MEMBER CALDWELL: Thanks, Lynn for your very comprehensive written comments. There was a lot in there and I really appreciate that. Would you just, kind of, spell out in simplest terms possible, just some of the key aspects of the risk mitigation, conflict of interest stance that you folks are taking. I hear a lot of big words in there and the ISO reference and all that stuff. And I'm trying to boil it down just for my small brain here. So appreciate that.

MS. COODY: Well, Brian, this topic here is not to confound anyone, even a genius. It's oversight of accreditation is a multi-layered topic and it takes a while to get your head around it, so don't feel alone. We have been concerned for a long time about the aspect of risk mitigation. And the new ISO, the ISO has fairly recently been updated to also include more of an emphasis on this. One of the new elements is this idea of having a risk mitigation table and also vetting it with their stakeholders. So some of that, there are
we've identified multiple risks that were not included in the risk mitigation table, as I said in my -- both my written and oral comments. And there are some significant risks. One of the concerns -- we also detail this even more if you could believe this in our comments on regulatory priorities. One of the risks that we're concerned about, is the risk of inadequate oversight of the NOP accreditation system due to conflict between the peer review provisions in OEFFA and the regulations. This is a long-standing issue and I feel -- and we are -- OPWC has discussed that we feel that we need to get this fixed over -- it will require a change to OEFFA but we feel like it's very important.

Another issue is that there is no continuous oversight. And by that I mean, the risk that the oversight of the NOP Program has -- is based on this peer reviewed process that is inadequately matched with OEFFA. Additionally, it does not require -- it doesn't have a mechanism for enforcing timely over top, timely completion
of non-compliances. So there are a number of really serious risks, things that we view as serious risks that were not included in this table. And what I would recommend is a kind of another look at this table so that it does take into effect -- into account all of the three major underpinning of the NOP's accreditation system. That would be NOP's own regulation, it's the ISO 17011 and any other provisions from the general management of agencies from the USDA. I'm not very familiar with that part of it, but I'm sure Jenny and others would be. So like I say, it's complicated and I appreciate you reading it. I do. I very much appreciate that.

CHAIR POWELL-PALM: Thank you for that question, Brian. Amy has another question for you, Lynn.

MEMBER BRUCH: Yes. Lynn, thank you so much for your time here today and all the time you and your organization put forth such as the written comments. They were wonderful. I really also appreciated the handling standards that you
reiterated from last meeting to this meeting, that's definitely something that put in the forefront, I appreciate you mentioning that again. My question draw more broad-based, it's in terms of innovation. So when I went through your comments, and you can correct me if I'm wrong, I'm kind of paraphrasing here. In the section on biodegradable bio-based mulch, you mentioned that the Board's most recent recommendation for an annotation change encourages development in that industry, which I think is a great -- it fosters innovation. And then as we compare that comment to the comment made about highly soluble nitrogen, the comment seems to be a little bit different in terms of that fostering the innovation approach. You say, well, now -- or, I mean, it wasn't you, somebody in the organization wrote that, you know, it provides basically defines the limits of acceptability for that next generation of fertilizers. And those are, you know, could be actually, the tools that help some of the growers that you were saying, you know, need some
additional assistance maybe on their fertility program. So I just kind of wanted to understand the difference frame of reference between those two products and invasion.

MS. COODY: Well, that was a very perceptive reading of our comments, Amy, and I congratulate you on that care. I would like to compare and contrast the amount of times that the biodegradable mulch -- plastic mulch has gone through the subcommittee and the NOSB and public comment. When we are making a -- basically a really big step forward, I feel like there needs to be much more consideration -- an iterative consideration of these concepts. So with the highly soluble nitrogen concept just coming out first as a proposal. I didn't feel like that was -- it was ready to be accepted just with the way that it was framed, the way that it was based, et cetera. So although I certainly agree that we need to take a careful look at especially kind of new paradigm materials that are likely to come out in the future, and to review them against our
evaluation criteria, I did not feel that the -- that this particular proposal was ready to go forward. And I tried to provide as much concrete information about that, including our proposed revision of the actual motion, that would be the basis for its implementation. So at each step where I was expressing concerns, I believe I was also trying to provide a way forward for another way of considering this very important issue in organics.

MEMBER BRUCH: Thank you, Lynn. I appreciate that.

MS. COODY: Thanks, Amy.

CHAIR POWELL-PALM: Any other questions from the Board? I have just a quick more high-level question on HSN for you, Lynn.

MS. COODY: Okay.

CHAIR POWELL-PALM: When thinking about -- I think there's a fundamental acknowledgment that these highly soluble nitrogens are powerful, powerful for growing, but also powerfully impactful for the environment, which
is often why they've been at the forefront of many of our discussions. Do you think that when we're looking at growers who want to use them, that it isn't reasonable to expect them to be taking soil samples quite often; to be figuring out what do their soils actually need, what can they hold, what is the impact of using these materials? As of now, the material list would be fairly short because it is more aimed at the future but like you said, there are a lot of tools that growers have, cover crops, animal manures, other tools would not fallen under this proposed increased oversight. So, kind of, striking that balance of making it not too burdensome on certifiers since they're going to be the ones primarily responsible for looking at these materials, but also making sure that we're keeping up with both our own expectations, the spirit of OEFFA, and the consumer expectations that our fertilizers are not impacting the environment in a negative way.

MS. COODY: So I think it's very
important to look carefully at any kind of a new way of treating organic soil. I do agree that of course, many growers took many soil samples. But the problem with the way that the actual motion is framed for me is that it is dealing with nitrogen need and it's the basis of it is not the analytical soil test that you're talking about, like that's not how you're talking about creating the basis for comparison for certifiers to verify what the growers are doing. What the proposal actually says is it's trying to get a basic, kind of a regional basis for each individual crop. And then comparing your crop against that. It's not so much what's going on on the ground that I see as problematic, it's the -- it's regional basis for comparison, it's the baseline that I think will be difficult in -- for certifiers and growers to use to -- as an enforcement tool or as a tool for growers to figure out how much nitrogen they can apply, especially how much of these highly soluble nitrogens they can apply. So I'm just concerned about it being rigorous enough to actually pan out
as an enforcement tool. The way I think it would pan out in practice is that only the most egregious cases could be caught with this particular way of framing the motion or the implementation of it. In fact, most things would be -- most of the non-compliances would not hold up. And that's what I'm concerned about. If we're going to have a standard, I want it to be clear to both growers and certifiers, and the accreditation system. And also for compliance. So these are the holes that I was trying to point out and provide some suggestions for plugging.

CHAIR POWELL-PALM: Which we very much appreciate. Amy has one more question for you and then we'll move on.

MS. COODY: Okay, Amy.

MEMBER BRUCH: All right. Just as a follow-up to that.

MS. COODY: No problem.

MEMBER BRUCH: I was just wondering your perspective on sodium nitrate that has been around with a very similar practice standard. So
is that -- do you feel like that is clear in its understanding and regulation from a certified inspector point of view?

MS. COODY: You know I used to feel it was clear, until this proposal came out. Now, comparing them, you're correct in saying that they're similar, but they are not the same. The sodium nitrate wording talks about total nitrogen requirement, whereas this proposal talks about crop needs. And then uses those as the basis for the 20 percent calculation. So I now am unclear in my own thinking about whether we're talking about the amount of nitrogen that is -- let's see. How can I explain this? Whether we're talking about the nitrogen that is actually applied and 20 percent of that can be a highly soluble nitrogen product or sodium nitrate, or we're talking about a comparison to this theoretical basis for nitrogen need. So from now on, I am not clear about the sodium nitrate wording anymore because I feel like we're mixing metaphors here for how we're going to apply them. And there again it, since you read
my comment carefully, I could tell I had a section in there about, I'm concerned about stacking now of sodium nitrate and using the 20 percent different requirement for sodium nitrate. And then also allowing it as a highly soluble nitrogen fertilizer. So no, I'm no longer clear about it.

Sorry.

MEMBER BRUCH: Okay. Thank you. And I appreciate your time.

CHAIR POWELL-PALM: Thank you, Lynn, very much.

MS. COODY: Thank you.

CHAIR POWELL-PALM: Next up, we're going to have George Szczepanski, followed by DeEtta Bilek, and then Thomas Sisson.

MR. SZCZEPANSKI: Thank you to the NOP, NOSB, and stakeholders for giving me the opportunity to comment today. My name is George Szczepanski, and I'm speaking on behalf of the International Fresh Produce Association, which represents over 2,500 companies from every segment of the global produce supply chain, including over
500 companies directly involved in the production and sale of organic fruits and vegetables. IFPA recognizes the role that the sunset process plays in maintaining inputs and standards that align with the organic program, building a food system that enhances the ecological balance and natural systems. It should be recognized that the entire organic crops industry exists in the market place and is disadvantaged compared to conventional grown product as the result of having fewer tools in the toolbox with which to mitigate pest and disease issues that may occur. This often leads to destruction of unsellable crops, sometimes entire fields that had been destroyed by pests, ultimately wasting finite resources and necessitating increased consumer prices to maintain financial viability. Because growing seasons can be highly variable and production challenges unpredictable, the removal of items from the national list can cause further constraints to organic farmers and hinder mitigation efforts.
For these reasons, IFPA encourages judicial, objective, science-based decision-making when considering sunsetting allowed materials. With regard to highly soluble nitrogen fertilizers, IFPA urges NOSB, not to further just restrict their use as limiting it would put organic produce growers at a further disadvantage, and limit their ability to be successful in production. We believe the use of these products can be accomplished while maintaining organic production. We also support the continued use of a number of materials currently under sunsetting consideration based on the utility for production and lack of suitable alternatives. We've listed those with further detail and IFPA's written comments submitted to the docket.

With regards to NOSB technical support initiative from February 13, 2022, IFPA believes that technical support to the NOSB should be limited to careers scientists of all agencies within the USDA, EPA, and FDA, who could receive
and vet input from scientists of public land grant universities. NOSB is granted the authority to convene technical advisory panels to consider specific issues as a part of OEFFA, but the natural limitations of a 15-person group require that these outside sources should be utilized to ensure objective science-based rationale that guides this decision making process. We urge the NOSB to approach consideration of recommendations to the NOP with specific attention to need for adequate tools for fresh produce growers, for objective scientific review with an understanding of the diversity for the many crops growing regions and production methods in the organic universe. IFPA has submitted more detailed comments to the docket.

We're happy to provide additional information at any time. We appreciate your consideration of these comments in support of the fresh produce industry.

CHAIR POWELL-PALM: Thank you so much for those comments. Any questions for George from the Board? All right. Thank you. Again,
George, we appreciate your time today.

MR. SZCZEPANSKI: Thank you.

CHAIR POWELL-PALM: Next up, we have DeEtta Bilek, followed by Thomas Sisson, and then Josue Castellanos.

MS. BILEK: Good morning. I'm DeEtta Bilek. I'm the staff person for Organic Farmers Agency for Relationship Marketing, so part of my comments are from the organization, another part of them are from as a certified organic farmer. We are in Central Minnesota. Our farm has been certified organic nearly 25 years. I'm also a member of the Organic Farmers Association, OFA Policy Committee and some of my comments are on a personal basis there as well, because I do not always agree with the policy with the rest who are with me. The mission of OFARM is to coordinate efforts of producer marketing groups to benefit and sustain organic producers with a strong emphasis on opportunities to educate and engage producers in the benefits of co-operative
marketing. OFARM continues to be proactive on issues which either directly or indirectly impact our number of producers. We are asking the National Organic Standards Board to continue working to keep the Organic Program strong and to advocate for the needs of organic operations. While we want to commend the NOP for finally bringing up origin of livestock rules to fruition and the diligence to work through many aspects of strengthening organic enforcement rule, it still points to the problem of time involved in moving such important rule-making forward in a more timely manner.

Our primary concern for the organic grain producers that OFARM represents the implementation of the SOE rule is paramount. We do want to commend NOP on the progress that has been made in dealing with many surveillance and enforcement aspects of the fraud issue. There is still more to be done regarding organic traceability. Dealing with fraud has been a top priority of OFARM and our OFA numbers. Improving
the potentials to identify fraudulent transactions
is a necessary part of strengthening enforcement.

As the Board and the NOP consider what new systems
will be necessary to increase the traceability of
organic supply chain, there must be flexibility
for those producers who use paper systems due to
difficulty accessing the Internet. Traceability
requirements must also consider different
marketing structures. On a personal basis, I
personally support transaction certificates. I
think in the past helped, especially for spraying
farmer's crop farmers helped to avoid fraud. I
personally support including acres per crop in on
the organic certificate as well as making that
information available in the organic integrity
database. Regarding the proposed NOSB
recommendation on highly soluble nitrogen or
fertilizers. I as an organic certified farmer,
I'm personally concerned about the ability of
certifiers -- okay.

CHAIR POWELL-PALM: I'll ask a quick
question to finish that sentence.
MS. BILEK: Okay. Okay. So as an organic farmer, I'm personally concerned about the ability for certifiers, inspectors, and farmers to monitor the 20 percent of crop needs. And I wanted to thank the members of NOSB for their dedication and appreciate the opportunity to comment. Thank you, Nate for that.

CHAIR POWELL-PALM: Thank you so much for your comments. We really appreciate your time today. Javier has a question for you.

MEMBER ZAMORA: All right. Thank you. Hi, DeEtta. I love your name. I think this is the second time in America that I heard that name. So that's very unique.

MS. BILEK: Thanks.

MEMBER ZAMORA: And I appreciate your comments and it feels like you think like a farmer which makes me really happy and how you guys think of the collaboration among smaller farmers. And you said a lot and a lot of beautiful things, but there is something that I felt like I needed to ask you. You asked for the NOSB to keep
maintaining the strong -- really all the strong stand on how organic it is. Can you tell me in which -- just a little sample on how you feel that maybe the NOSB is not meeting your expectations for you and the farmers that you have these relationships, your constituents in your area?

MS. BILEK: I think it's more so that NOSB will make the recommendations and it takes a long time to get things into the rule. An example is the strengthening organic enforcement. I think once that is in the rule, it will solve a lot of our issues or concerns.

MEMBER ZAMORA: Thank You. Remember, I'm also -- I'm just learning and I want to know as much as possible and see how people think in different parts of the country and how we can definitely make this a beautiful thing that many people started many years ago. I dearly appreciate what they started because it's a beautiful thing and therefore, we have to do our best as a group to keep it as healthy and as
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1 accessible to everyone else.

MS. BILEK: Thank you.

CHAIR POWELL-PALM: Thank you, Javier.

I will remind everyone and I really appreciate the conversation. Please try to keep the questions a little peppy so we don't run out of time today. One question for you quick, DeEtta from me is: In your work with OFARM, it seems like there's a lot of the questions that we hear from folks highlight economic concerns in the organic producer landscape, be it dairy, grain inconsistency and enforcement leading to market surpluses. Could you speak a little bit more to what you see as the future of organic marketing and organic cooperation amongst farmers?

MS. BILEK: One of the things that the OFARM board members talk about is more collaborative marketing or marketing through a farmer co-operative. So I don't really know how to answer that, I'm sorry.

CHAIR POWELL-PALM: That's fair. No,
no, no, I just wanted to give you a chance. Again, 
really appreciate your comments today. I think 
that there's a lot more to be heard. So appreciate 
the work of OFARM and all you guys do. All right. 
We'll keep on going. So next up is going to be 
Thomas Sisson, followed Josue Castellanos, and 
then Stephen Walker. So Thomas.

MR. SISSON: Hello. Can you hear me?
CHAIR POWELL-PALM: Yes.
MR. SISSON: All right. Thank you.
My name is Thomas Sisson. And I'm the technical 
director of Ingevity to speak on behalf of 
distilled tall oil petition. Organic pesticide 
formulators have developed many excellent active 
ingredients but they recognize a need for inert 
additive to deliver the full benefits. Optimizing 
organic pesticide formulations means not only 
increasing the efficiency, but also giving 
formulation options on the type of products being 
developed. This includes the ease of use for the 
grower, as well as additional organic certified
pesticide options.

Next slide, please. Distilled tall oil is a versatile inert material with many functions. It is a bio based material derived from pine trees. There is a general lack of organic approved solvent which prevents the commercialization of many water, in soluble, natural active ingredients. Distilled tall oil is a natural adhesive or has sticky properties. We've all experienced pine tree sap we know the stickiness. This property helps hold active ingredients under the leaf surfaces, reduces runoff, and prolongs the actives life-cycle on the crops. Fungus sides and insecticides are particularly benefited. The inherent tackiness of distilled tall oil, before to choose it's an anti-leaching agent holding the active ingredient component at the surface of the soil. In granular formulations distilled tall oil can act as a time release agent by increasing the time granular products disintegrate, releasing the active
ingredients over a longer period of time.

Next slide, please. Approving distilled tall oil will benefit growers significantly. These include enhancing active efficiencies, more organic certified products, and ultimately to higher yields and hopefully lower overall cost. The commercial benefits of using distilled tall oil as an organic inert will ultimately reach consumers, helping to expand the organic crop market.

Next slide, please. U.S. growers are currently at a disadvantage in the global marketplace as distilled tall oil is allowed in organic products in the EU, Canada, and Japan. This also impacts formulators as they need to develop different products specific for the U.S. market. We believe the hurdles for acceptance is organic materials should be high. This includes inert ingredients like distilled tall oil. We also believe our petition demonstrates its safety and natural origins, and it clears this high
hurdle. The overwhelmingly positive comments support our beliefs. Distilled tall oil has been used safely for generations by formulators and growers in traditional crop protection products, allowing the use of this bio-based, versatile, environmentally safe, inert material, has multiple benefits to the organic community. Thank you and I look forward to your comments.

CHAIR POWELL-PALM: Thank you so much for your presentation and your time today. Any questions from the Board? All right. I know we'll be talking quite a bit about this next week.

And so we really appreciate the information you provided. All right. So next up, I don't think we're seeing Josue. If you're there, please make yourself known. Otherwise, we'll move on to Stephen Walker, followed by Caleb Goossen, and Elijah Dean. So Steven, if you are there.

MR. WALKER: Hello there. Hi.

CHAIR POWELL-PALM: All right. Hello
MR. WALKER: Good morning, afternoon, depending on where we're at. I'm Steve Walker from MOSA, an organic certification agency based in Wisconsin. I want to stress some points for our written comments on supply chain traceability, adding acreage to certificates, and standardizing bill of lading info. MOSA certifies over 2,000 diverse organic operations throughout the U.S., including many quintessential, idyllic organic farms. We recognize preventing fraud and strong organic standards help these operations to survive and we also recognize the three requirements and keeping certification accessible to keeping requirements can unevenly burden organic operations or organic system plan update season. We're dealing with a number of smaller organic operations that are now choosing to drop their organic certification because of the squeeze. That's a loss chore label and I can share an example if you-all ask about it. So we support finding low-burden steps to improve traceability and fraud
deterrence, requiring acreage on certificates and consistent data points on transaction documents seem achievable. But we'd like clearly regarding how crops and acreages would be listed. And we have a few doubts about efficacy. We inferred certificate that balance practicality for certified operations with value in serving the organic marketplace. The value of acreage reporting may depend on certifiers agreeing on a reporting taxonomy. Finding that agreement may be a challenge because some case specific flexibility in certificate language can enable better organic community service in our experience. Our organic acreage data could be reportable and be mostly accurate. Variables like crop rotation changes or multi-cropping may introduce some data discrepancies. Also, traceability can't fully rely on a single point certificate and purchase information. It may be affected by the number of buyers or sellers interfacing with the inspected operation and
whether or not sales are from the same crop year, as indicated on certificates. Our written comment also noted that crop acreage might be confidential business information. But in some, we can support making crop-specific acreage publicly available, if the organic community finds that the potential benefits outweigh confidentiality concerns. And if taxonomy and accuracy expectations are not unduly burdensome. We have a lot of confidence in the certification and inspection community's ability to collaborate, to develop consistent forms, including standardized transaction documents. We also would appreciate technical assistance on record keeping expectations with examples and including use of appropriate regulatory discretion when deciding which communication tools to use to bring operations into better compliance. That's all I have. Thanks for your work. I appreciate the clock started ticking kind of late for me.

CHAIR POWELL-PALM: Thank you for your
comments. Any questions from the Board for Stephen? Mindee has a question.

MEMBER JEFFERY: Yes, thank you for mentioning the loss of local producers. I am interested in hearing your reasons. I see that in our area as well.

MR. WALKER: I have -- yes, thanks for asking. I kind of debated that one a little bit. I'll share one written response that we received this past week from a producer, I mean, it's an example of some that we're hearing. It's not throughout the system, but we're hearing this from some operations. This is in response to reminding them that, hey, we haven't received your organic system plan yet for your update yet on our April 1 deadline. And they said that they've been in serious consideration about our organic certification status, contemplating it's place in our small farm, both from a production and marketing perspective, as well as factoring in the
effort needed when growing under extreme conditions. They had a drought last year as an example. And so we've come to the conclusion that although we've been grateful for the certification, maintaining our certified organic status is not something we find necessary, given the paperwork and process involved, moving forward. And they noted some of their considerations, including that the farm is small, producing for local seasonal distribution. They're finding that the amount of work involved in the paperwork and process requirements for a multi-crop vegetable farm versus a commodity farm, don't justify the small income the farm produces. Second, the certification status is for marketing purposes only, it doesn't affect how they grow. We have always and will continue to farm with the same organic and regenerative practices. And then they mentioned drought or other extreme weather conditions that's requiring more time effort caused or medial methods, mental, physical stress
and the added burden of the current requirements for certification on a small farm, like theirs, it's one set of stresses that they felt that they could eliminate and still be able to focus their energy on producing food. And then they affirm, you know, we have to do the work that we do. They understand that we're required to administer and enforce the standards as written by the USDA and it was their hope that working together at all levels that we can improve the process and ease of implementation for all types and sizes of farms. So it's the kind of thing we're hearing. Some, yes.

CHAIR POWELL-PALM: Amy has a question.

MEMBER BRUCH: Yes. Stephen, thank you for summarizing these important points of view and just kind of highlighting the record keeping requirement, keeping costs low, and then that maintaining integrity, it's kind of the three legged stool there. You made a comment in your
written delivery of the public comment process
about MOSA being an active participant in groups
that the ACA puts together. And I thought that
was -- that's great so that participation and you
went on to say about collaboration potentially
would be needed between ACA and IOIA to generate,
you know, best practices for key data that we could
capture potentially, with bills of lading. I just
wondered in these working groups, I think the
collaboration pieces important. Is there ever an
opportunity for the farmer point of you to be
integrated in some of these types of workshops?
So you can -- maybe there's an idea to streamline
and get everybody's point of view across?

MR. WALKER: Yes. I think there is an
opportunity typically the working groups do
involve really just certify sometimes we'll reach
out and include other stakeholders. I'm not aware
of a case where we've actively reached out to say
to get farmer representatives as a part of that
working group, and I would assume there could be
openness to that. On the other hand, or maybe not on the other hand, but as a part of that, I think certifiers are pretty well aware of what a lot of the farm issues are and a lot of certifiers are actively farming as well. So it's a good point and I think that the main point is to bring the right stakeholders, and perspectives to the table so that we don't implement something that we find out later on. We should have thought about that.

MEMBER BRUCH: Yes, absolutely. Thank you. Appreciate it.

MR. WALKER: Yes. Thanks.

CHAIR POWELL-PALM: We have another question from Liz and then Kim. No question, Liz?

Okay. Kim, go ahead.

MEMBER HUSEMAN: Sorry. I couldn't get my thing to unmute. Can you hear me now?

CHAIR POWELL-PALM: Oh, we can, yes.

Go ahead.

MEMBER HUSEMAN: Okay. Sorry.

CHAIR POWELL-PALM: No worries.
MEMBER HUSEMAN: Okay. Stephen, thank you very much. Being a small farmer myself, could you, or do you know in regards to the smaller scale producers, are they primarily retail selling and no wholesale production? And because they're retail selling, there may be already demanding a pretty high price for their product that they're selling and so therefore, they don't feel that the organic certificate, organic label would allow them a higher price? And therefore, they don't feel that it's important? I'm just trying to understand more about why the smaller producer feels like it's not necessary for them.

MR. WALKER: Yes. I think that it's a fair characterization but I'd be cautious about stereotyping and saying, all small producers feel this way. And I don't know how well I can represent that per se, but I think a lot of times it is a choice of what their markets need. And if their distribution chain is direct to consumer then maybe they're deciding that they can communicate the
attributes of their operation without having the organic certification. However, is it what we want for folks to be able to say, Looks it's organic, and organic means, look at this whole set of standards over here and again, I've appreciated some of our Nate's questions in the last couple of days about what can we to do to make organic become more than, you know, five percent of the market, to get it up to, you know mostly it's organic vision anyway of a thriving organic world.

And I think there's a lot to be said for education, better promotion of what organic's stacked benefits are. Talking about what we do well, at these meetings.

So often we're debating the things that, you know, we haven't figured out yet and I think it can be characterized, maybe it's, well, those organic people aren't agreeing on anything. But we are, you know, we agree on the basic principles and I think that if we can unify around
and health ecology in fairness care, soil health and the things that we agree on. And really put that message forward, that it would be a way of you know, moving the whole program, the whole community forward. And also, if it's a cost issue, cost in time, cost in dollars, and now as so many of us are working at home and we're able to seek staff support from all around the country. We're finding that although we're in the Midwest were kind of competing with some of those capacity changing resources on a national level. And that translates to what does our clientele look like versus what another certifier's clientele looks like? How many dollars are we bringing in? What can we afford to pay versus certifiers in other locations? So some sort of equity and cost support for the necessary business of certification would be helpful and also just seizing that organic is still a gold standard. And as we see other labels trying to come in and patch in places where we're not as strong as we can be, some of those can be
seized as well. Organic is regenerative, organic is climate-smart agriculture. Those sorts of things. So --

CHAIR POWELL-PALM: I so appreciate everything you're saying, right now, Stephen. In the name of time, I'm going to have --

MR. WALKER: Yes.

CHAIR POWELL-PALM: Kim, asked her question. But -- I am not cutting you off. That is exactly what I hope the group of our community starts engaging as a talking point. Kim, please go ahead.

MEMBER HUSEMAN: Hi Stephen, I really appreciate the way that you've helped bring a light to a lot of the -- a lot of these topics that we struggle in how to manage through. My question for you is: In a lot of the comments that I'm hearing and reading the three words as we try for better SOE practices is traceability, transparency, and confidentiality. From your perspective, what is the line in the sand between traceability and
transparency and encroaching on confidentiality?

MR. WALKER: I think -- I don't know if there's a concrete line. I think it's another question of balance. And I know when you're writing regulations, you want to have it, you know, concrete so, you know, people can say am I meeting the standard or am I not. But it -- some people like words in the standards like significant which is open to interpretation. I tend to like those kinds of words and then be able to apply those to the aspects of the operation. And what this operation need to come into compliance versus another operation. So yes, it's tricky to draw -- we're in the business of drawing lines. Sometimes a line can be drawn and then examples can be given that help to show better where that line is, you know. Here's examples of things that are clearly not compliant. Here's examples of things that clearly are. And sometimes we don't get examples of things that are on a line that might be a little bit fuzzy, but we're all really good
at critically thinking.

MEMBER HUSEMAN: Thank you, Stephen.

CHAIR POWELL-PALM: Thank you so much, Stephen. I apologize. I really have to keep on moving, but thank you so much for your insights today.

MR. WALKER: Thank you.

CHAIR POWELLL-PALM: I appreciate it.

MR. WALKER: Bye, bye.

CHAIR POWELL-PALM: Next up, we have Caleb Goossen, followed by Elijah Dean, and then Jeff Dean. Caleb, the floor is yours.

MR. GOOSSEN: Hello. My name is Caleb Goossen. I'm the crop specialist for MOFGA, the Maine Organic Farmers and Gardeners Association, one of the country's oldest organic associations. I believe the most important topic for me to comment on right now is regarding the restriction of nitrogen fertilizers with a carbon to nitrogen ratio of three to one or less. I think that -- I thank the crops of the committee for their work
on this topic and fully support the proposal. Highly available sources of nitrogen with carbon to nitrogen ratios of three to one or less should be greatly limited to ensure that organic fertility management remains true to the foundational principle of feeding and building soil. Carbon to nitrogen ratios are the best method that I am aware of, to measure a natural fertility materials remineralization, and properties as a food source to soil life and subsequently their plant availability. The current proposal would do an excellent job of providing much needed guardrails while still allowing organic growers great flexibility in different growing conditions. With very low added burden for most farmers and certifiers.

The direct relationship between carbon to nitrogen ratio and release rate of plant available nitrogen has been known for at least 80 years. There's a study on the topic from the New
Jersey Ag Experiment Station that was published in Soil Science in 1942. The proposed three to one carbon to nitrogen ratio is a generous dividing line for distinguishing rapidly available nitrogen fertility amendments that allows great producer flexibility in meeting acute crop needs with common traditionally used organic fertility sources while still setting a minimum floor to ensure that at least 80 percent of the nitrogen is also supplying at least some carbon to feed the soil. Bruce Hoskins who is at the University of Maine suggests that a ten to one carbon to nitrogen ratio is the threshold for rapid nitrogen availability from fertility amendments. And that's based off of many other studies. Bruce's own studies, Heather Darby's studies at UVM, it's pretty well established. So anything that's below that and still about three to one, you're still allowing farmers to get that rapid nitrogen release. And then there's that additional 20 percent of nitrogen that could be coming from even more readily
available sources of fertility. So with that I yield my time and happy to answer any questions about this or other topics.

CHAIR POWELL-PALM: Thank you so much for your comments today. Any questions from the Board? Amy has a question.

MEMBER BRUCH: Caleb, thank you for your time today. Thanks for your perspective. You touched on this briefly in your comments just a little bit ago but I just wanted for you to quickly compare and contrast the CDN ratio with the -- just looking at nitrogen solubility.

MR. GOOSSEN: Sure. I mean, one trick is that solubility is sort of a tricky concept. If we're talking about actual compounds and how quickly they dissolve versus whether the substance is miscible and is able to be put into a solution, of which many of some of our newer fertilizers out there are easily put into a -- easily, at least in solution, maybe not dissolved in solution, and can be applied liquid. And, you know, if we think
about some of our common fertility sources from forever, manure, there's usually ammonium nitrate that comes out readily as a soluble nitrogen source. That's why I actually prefer to use plant availability or highly available nitrogen as a term or less available. Bruce Hoskins who I mentioned just uses rapid release, gradual release, very slow release, or tie up of nitrogen based on that carbon to nitrogen ratio. And it really just kind of gets back to the fact that microbes in the soil possess a very specific carbon to nitrogen ratio within their own bodies essentially. And when you supply them with excess carbon, they tend to lock up nitrogen, when you supply them with excess nitrogen, they will blow through whatever carbon is available to them in really loose terms.

MEMBER BRUCH: Thank you, Caleb.

CHAIR POWELL-PALM: Thank you for your comments, Caleb. Appreciate your time today. All right. Next up, we've have Elijah Dean, followed by Jeff Dean, and then Joel Kurtz.
MR. ELIJAH DEAN: Okay. Can you hear me?

CHAIR POWELL-PALM: Yes, we can.

MR. ELIJAH DEAN: Excellent. All right. Hi, everyone. This is Elijah Dean. I am a full-time farmer in North Central Ohio, and I have two topics I'd like to talk to you about today. Just like the previous commenter, my first one is about the highly soluble nitrogen fertilizers.

We've -- I fully support the extension of the existing rules regarding Chilean nitrate and using that as only 20 percent of the crops nitrogen needs. And it seems like a logical extension to expand that to all other similar nitrogen sources. And I really appreciate the effort to establish general guidelines with the three to one ratio. I really like how that allows for flexibility in farmers' operations. And it also allows for flexibility in the development of new products coming to the market. I think it's a really smart way to provide for the needs of multiple groups within the organic
space. And as a farmer, I know that having that flexibility can be very important on certain years, depending on how crops are -- have performed through the winter. For example, our wheat right now, it could use a bit of extra nitrogen and having the ability to use Chilean nitrate for just that little extra boost is extremely beneficial.

Secondly, I would like to talk about the timing and format of meetings. This is probably a topic that you all are tired of hearing from me about. I think this is the fourth year maybe that I've been mentioning it. But having these meetings in the spring and in the fall is extremely disadvantageous to the farmers of the country. And it has been beneficial to have all of these Zoom meetings over the past couple of years because it puts us more on an equal playing field. It's much easier to take a couple of hours than it is to take a couple of days this time of year but still going forward I think it would be very advantageous to have the meetings at a time when
more of the country's farmers are able to attend. And there are many different ways we could go about that. Perhaps just shifting the meetings two weeks every time and gradually progressing through the year. Or maybe eventually progress them to a time such as the winter when the majority of the country's farmers are available and able to participate. I think it would be advantageous for the Board and advantageous for the organic movement as a whole. Thank you.

CHAIR POWELL-PALM: Thank you for your comments. We really appreciate your work and the OEFFA Grain Growers Chapter is always very helpful with bringing farmers' voices to this conversation. Amy has a question.

MEMBER BRUCH: Elijah, thank you for your time today from here to the operation. The last comment you mentioned, I believe you referenced him that it shouldn't be a burden, but it's calculations if you wanted to use a highly stable nitrogen product and you mentioned that the
guidelines were clear in the proposal, and that you potentially would be choosing to use one of these types of products. Do you find the calculations to be straightforward enough, that you feel comfortable with what's being proposed?

MR. ELIJAH DEAN: Definitely, yes. The discussion document lays out a couple of, for me easy to follow examples of how this would be implemented. Both for an individual source of nitrogen under this requirement and also for multiple. I think it's laid out very clearly, and I would have no problem at all implementing that in a way that follows the rules.

MEMBER BRUCH: Thank you. I appreciate that.

CHAIR POWELL-PALM: Logan.

MEMBER PETREY: Thank you, Elijah. I'm curious, you said this winter, you're going to need a little bit of sodium nitrate to help you out. Just curious to what kind of winter conditions you may have had or spring conditions
that where you're requiring the use?

MR. ELIJAH DEAN: It's still something that we are considering. We managed to get our wheat planted early and we had a mild winter that it survived and is looking really good. With that stand, we are probably going to be limited on nitrogen for the yield potential of that crop. I am not sure yet whether we're actually going to go ahead and use Chilean nitrate to provide that a little boost to it or not. But the option is there and I really appreciate having that flexibility.

MEMBER PETREY: Yes. And I'm speaking from a farm in the southeast where we use Chilean nitrate a lot of range but I was just curious that what may have faced that came -- that would have me put that out. Also, just to comment on the, you know, the meetings, we'll definitely talk about it. It has come up a lot. You know, the time of that also, you know, something that we're going to have to consider is the on boarding if you know,
new board members and then the exit of other board members. But we definitely want to look into what we can do. So thank you.

MR. ELIJAH DEAN: If I could add one more thing about the wheat yields. In our area, depending on when the wheat is planted and how the winter goes, it would be unwise for us to fertilize for an absolute top crop every year. Because if the wheat doesn't do well, we would be really over fertilizing and adding a lot more nitrogen out there in the fall with manures, than the wheat will actually take up. So if we fertilize for a middle yield and then add the Chilean nitrate on top, we can make sure we're not over fertilizing.

MEMBER PETREY: And when you say over fertilizing you're meaning with the manures where we could be polluting with organic fertilizers?

MR. ELIJAH DEAN: Correct, yes. Possibility.

CHAIR POWELL-PALM: Thank you, Elijah.

I really appreciate your time today. Next up,
we have Dean, sorry, Jeff Dean.

MR. JEFF DEAN: Can you hear me okay?

CHAIR POWELL-PALM: Yes, we can.

MR. JEFF DEAN: All right. I am Jefferson Dean of TimberLane Organic Farms and you just heard from my son. Also an O for organic, Ohio ecological Food and Farmers Association Grain Growers Chapter member. I want to thank everybody for serving on the board. I know it's a big responsibility to uphold the integrity of organic industry and we appreciate your efforts. I have a few things I want to talk about. First is hydroponic and container systems. These systems do not use soil and they don't comply with the letter of the rules nor the spirit of the rules. Soil and soil building is right in the description of organics, as well as other places such as crop rotations, both stating that the goal is for -- to build soil. This needs to stop or change the rules. We can't have, you know, noncompliance being certified. As far as highly soluble
nitrogen fertilizers, this is an easy one for me because there's already a precedent, and that's Chilean nitrate. I support the, you know, the addition of this motion. And I think it's pretty simple. If a grower thinks it's too complicated to figure it out, they don't need to use it. You know, and if they're using it too much, they're probably not following the organic spirit of organic. So as far as timing of the NOSB meeting, this is getting to be a sore subject with me. I've been bringing this up -- this issue up for over five years about the times of the meetings -- and they need to be scheduled different so that more farmers can participate. I'm beginning to think that maybe the Board -- at least in the Board in the past, is -- didn't want farmers to participate and that's why we -- they've kept the meetings, you know, in the spring and the fall when it's very difficult for most farmers to participate. So I want to thank you again for listening to my comments and open to any questions.
CHAIR POWELL-PALM: Thank you so much, Jeff, for your comments today. Any questions from the board? Amy?

MEMBER BRUCH: Yes, Jeff, I don't have a question for you this time, but I just want to say thank you. I really appreciate your participation taking time away from your operation. This is really important to hear your voice and the other farmers' voices. Thank you.

MR. JEFF DEAN: Thank you very much for your participation.

CHAIR POWELL-PALM: Mindee.

MEMBER JEFFERY: Thank you. Also really appreciate you. I was wondering if you see this platform as a functional compromise to the timing question?

MR. JEFF DEAN: I'm not sure I think that meeting in person has more impact, but this helps definitely. The problem with meeting in person is that they're constantly big business trying to get in and water down the rules, and it's
very difficult for farmers to compete with that. And they can send an entourage of people to come in and, you know, speak to you, and it's very difficult for farmers to, you know, spend their own money to travel across country to try to compete. But I think in person it's more impactful. I would like to ask you is the in-person, you know, face-to-face conversation more impactful than the Zoom?

MEMBER JEFFERY: Good question. Honestly, this is we haven't -- my class hasn't had an in-person meeting yet, so the actual experience isn't there for me. And I'm really interested in whatever the functional compromises that gets us the most participation because I am very interested in all the farmer, especially small farmer prospective so thank you.

MR. JEFF DEAN: I'd also like to say even, this time of year, it's difficult for us to get away sometimes to do a Zoom. I know we've done a couple of them in the past --
PARTICIPANT: Give me two minutes and then we go out.

MS. ARSENAULT: Sorry, I was -- Jeff, I just muted you by accident trying to mute someone else. So can you unmute yourself to finish? Sorry.

MR. JEFF DEAN: I'm sorry. I didn't realize that. I was like, even, you know, the meetings at this time of year, the spring and the fall are difficult, you know, sometimes, you know, we're lucky today, we're not, you know, out in the field, but we've done the call-ins at the edge of the field. We stopped the tractor and get in the pickup and call in. It can be difficult I know a lot of farmers don't participate because of that. So there's -- I don't see any reason why you can't have them, you know, in the winter and, you know, having them in Phoenix would be great so we can all come down and enjoy the week in warm weather, but anyhow. Thank you very much.

CHAIR POWELL-PALM: One thing I'd just
like to throw at this conversation is we do legally
need six months between the meetings. So it's just
tricky to find that, you know, if we're in the heat
of the summer, then and the depth of the winter.
Then always going to be folks who can't make it,
but Rick has another question.

MEMBER GREENWOOD: Just --

CHAIR POWELL-PALM: Rick, I think your
muted.

MEMBER GREENWOOD: Jeff, I agree with
you because I think I'm the only board member now,
since I'm in my fifth year, that actually has been
to the live meetings and I agree they are more
impactful. In particular, since I also am a
grower. Hearing the feelings that people have,
in particular, when we went through a lot of the
dairy issues, I mean, you really get a feel for
what's going on that's missing on the Zoom. The
other side of it is using the Zoom. Like for me,
it's two days that I gain because I don't have
travel time and so it's a tough question, it really
is. And so I just harvested two weeks ago and I'm in Southern California so it's really hard to balance out a big country like this and find a time that's appropriate for everyone. But, you know, I guess I can say I feel your pain.

MR. JEFF DEAN: Well the suggestions been made that we conduct the meeting up, you know, or move forward two months, two weeks, every time. And that would make, you know, comply with the six months thing, but also change the meeting every year, so that, you know, everybody has a chance.

MEMBER GREENWOOD: Yes. Got it. Thanks a lot.

CHAIR POWELL-PALM: Dilip, has a question.

MEMBER NANDWANI: Well, this is not a question, it's just a suggestion or a comment. Another option, you know, listening to this timing of the meetings, we have a hybrid formula that's available. And it could be in person as well as on the Zoom as well those who cannot make in person,
that's I wanted to --

CHAIR POWELL-PALM: Thank you for that. Yes, there's going to be some piloting of some new tech integration in the, hopefully in-person fall meeting. So I hope that we'll be able to glean some ideas from that. Really appreciate your time today, Jeff, one question I just wanted to throw your way is: As an organic farmer, what is holding back your growth? What would -- and what do you think it would take for more of your neighbors to start going organic? You're conventional neighbors. What is it that we can -- what barriers are there and what can we overcome to make it happened?

MR. JEFF DEAN: Educate --

CHAIR POWELL-PALM: Education of the consumer to drive demand so we have more markets?

MR. JEFF DEAN: No. Education of the farmers. I don't think they understand much about organic and sometimes there's still a bad connotation out there of what organic actually is
and how it works. And they're coming around, we picked up a fair amount of new growers in the last few years. The transition seems to be a tough hurdle for a conventional farmer to get over. When they actually go through it, I don't think it is as nearly as difficult as they think it is. But that would be part of the education on how to get through that. There's many ways to get through transition without, you know, a financial burden. So I think education is the key.

CHAIR POWELL-PALM: All right. Well, we really appreciate your time here today.

MR. JEFF DEAN: But I think nutrition and education is key to all our problems in the world, social and economic. So --

CHAIR POWELL-PALM: I can agree with that, yes.

MR. JEFF DEAN: Thank you.

CHAIR POWELL-PALM: Moving right along, we'll next time have Joel Kurtz followed by Raymond Yoder, Jr., and then Doyle Stoller.
MR. KURTZ: Can you hear me?

CHAIR POWELL-PALM: Yes, we can.

MR. KURTZ: Hello. My name is Joel Kurtz. I worked as an agronomist at Maysville Elevator. We are a local feed elevator located in the Amish community in Holmes County, Ohio. I'm also a contract inspector for OEFFA. And I want to thank all the board members for the service you've been providing certainly. Thank you for that. First comment, I support restricting the highest volume of nitrogen fertilizers. I think this will encourage the farmers to manage far more ecologically from an organic systems approach. I believe farmers can be more profitable and provide healthier food crops by managing soil health instead of depending more on the purchase type of inputs. And then also on the oversight, the -- to deter fraud, you're gaining trackability infrastructure. I support a universal bill of
lading. I believe this would increase transparency. And then on acreage reporting, I believe acreage reporting would work best if approached by size, small acreage could be reported as mixed crops. I think on Tuesday we had -- we heard about that conversation. And then just a side note on data systems, building traceability infrastructure. I believe the integrity and the future success of the organic system is dependent on a flexible, decentralized auditing system, versus a single centralized system. Recent world events have shown that being dependent on centralized systems is not in the best interest of people that need food to survive which is all of us. By having flexible, diverse auditing methods, it appears to not be as efficient, but when one method fails, another method may be able to continue providing the needed service. Variability and farm size also can dictate what method is most successful for farmers. I guess, in short, paper still has value. Thanks again to
the Board and I'm open for questions.

CHAIR POWELL-PALM: I just want to throw out real quick that I am so excited we have someone from the Amish community commenting today.

I think this is something really, really special to be able to hear from a wider swath of organic farmers. So thank you for your time. Any questions from the Board right now? I have a question for you. When we look at -- we've heard from several mostly certifiers, that we want to create record keeping requirements and advancements in record keeping that are not overly burdensome on certain groups, such as the Plain community who's going to usually more paper-based.

With this idea of a universal bill of lading does that seem doable with the paper, primarily paper-based systems that your community and your business runs on?

MR. KURTZ: Yes, I believe so. If you have -- if we've got a universal bill of lading that the farmer can actually fill out, and that
can follow along to, you know, the end-user or sale, like for example, the elevator at that point, if it's a non-Amish business that can input that into the data system, I don't think that would be a problem.

CHAIR POWELL-PALM: All right. I really appreciate that. And then in looking at the acreage reporting, do you feel that you and your neighbors and other folks in your community are comfortable having their acreages listed on the certificate?

MR. KURTZ: Yes, I believe they are comfortable reporting their acreage. The big thing is just making, you know, moves in planning in the springtime when they change which crops they do. And most of them are smaller acreage with, you know, 20 acres all the way down to, you know, around three-quarter acre or whatever. But no, I don't think they would have a problem reporting the actual acreage for their crops.

CHAIR POWELL-PALM: Thank you very
MEMBER BRUCH: Yes, Joel, thank you for your time today and participation. And it sounds like you participated through listening on Tuesday too, so the thanks for that. You just mentioned in your answer to Nate that if we had some type of a universal bill of lading that could maybe transfer through. And I see that you're a part of, and you mentioned this, the Maysville Elevator. Is there a chance with low burden to associate the bills of lading that farmers have with the settlement sheets that maybe you supply growers just so that reconciliation and tieback could take place with low burden?

MR. KURTZ: Yes, I believe so. I believe something like back to work out. Obviously, as far as the elevator goes, we have to keep, you know, records anyway, and we are dealing with the farmer. And so the farmer's success and our success hinges on us working together and making it work for both of us. And
so I guess I feel in our situation, if we can provide something that the farmer has a hard time providing himself, if we can provide that for the farmer, and provide that integration into the system, that will be very beneficial to the farmers and they will not have a problem to use it that way.

MEMBER BRUCH: Great. Thank you so much.

CHAIR POWELL-PALM: Thank you, Joel. Thank you so much for your participation and comments. Next up, we have Raymond Yoder Jr. followed by Doyle Stoller, and then Alan Lewis. So Raymond --

MR. YODER: Good afternoon. Can you hear me?

CHAIR POWELL-PALM: Yes, we can just go ahead.

MR. YODER: Okay. So Raymond Yoder Jr. representing Green Field Farms here. So Green Field Farms we have about 330 members and we're
neighbors with Joel here in the Plain community in Central Ohio. And our mission is to keep the small families on the farm. Being that bridge from the producer to the consumer. And I'm going to thank all the NOSB Board members for your time serving. Hopefully the rewards of positive change can outweigh the personal sacrifice that it takes to do that. First off, I'm going to support the continued use of restricted micronutrients. I feel those are just very essential for soil health and highly nutritious crops. And at the same time, I do want to mention something that we have really worked with or struggled with and that is magnesium. Most of the soils that we work with in the Midwest region, it's inherently high in magnesium, the soils are. And we've found that it's just always low in the crop, if we do a tissue analysis and the -- our preferred source for magnesium correction is magnesium sulfate. And in the letter of the rule, it says it's restricted in the soil. And so for high in the soil, we're
low in the crop and we, you know, we talk about this in our winter meetings with the farmers and we always get that question. Well, it's -- we can't apply it because it's excessive in the soil.

So my recommendation would be to change the rule there so that we could -- and so the thing of it is the magnesium deficiency is often identified by the farmers as a nitrogen deficiency because it looks similar, yet it is identifiable. And if we -- nitrogen covers it up. But if we use nitrogen to do that, quality suffers, unless magnesium is fully applied. The other thing on the highly soluble nitrogen. I do support the proposal there to -- I -- the concept -- the commercialized concept of applying, you know, so many parts per million of NPK every day for record yields is just not soil friendly, so thank you.

CHAIR POWELL-PALM: Thank you very much for your comments today and your participation. Amy has a question for you.

MEMBER BRUCH: Yes. Thank you so much
for your participation today, Raymond. I thought it was very interesting. What you're talking about with soil balance being key and I tend to agree with you that calcium-magnesium relationship is really important and sometimes nitrogen might seem like it's not there when it really is. So getting that soil balance is important but I wanted to ask you, in terms of it looked like maybe if you had more time, you're going to get to CACS in our topic, one of our topics is on, yes. One of our topics is on a just on a universal bills of lading and displaying acreage potentially on your certificate. I had a question from you with your buyers --

MR. YODER: Yes.

MEMBER BRUCH: -- has anybody requested anything in addition to your certificates in the past just to prove what you grow is what you can sell?

MR. YODER: Our buyers have not other than, you know, obviously they request a lot of
food safety paperwork, you know, our farm food safety plans and all our gap certificates and things like that but as far as for integrity purposes? No.

MEMBER BRUCH: Yes.

MR. YODER: And we do sell direct to Kroger's and Harris Teeter and places like that.

MEMBER BRUCH: Thank you, Raymond.

CHAIR POWELL-PALM: All right. Thank you again, Raymond, thank you for your comments.

Next up --

MR. YODER: Your welcome.

CHAIR POWELL-PALM: -- we have Doyle Stoller, followed by Alan Lewis, David Meyer, Jackie DeMinter, and then we'll take a break. So thank you, everyone. The conversations have been robust and we're running a little behind, which is okay. All right. Doyle, yes, please go ahead.

MR. STOLLER: Hi. We are dairy
farmers in North Central Ohio. We've been organic since 2001 before there was even a market, so we clearly believe in the system. My dad's actually on the board of directors of Organic Valley, so but anyway, the reason I'm here. I don't want to sound impersonal, but at the same time. So I can, you know, keep everything clear and get away once I'm just going to read a little bit here. I'm here to highlight the importance and necessity of copper and zinc hoof care products. Heel warms and foot rot is present on most dairy farms. These two pathogens were on our farm when we moved here in 1996. Most well managed farms use copper and zinc products both and foot baths and sprays or salves. Without these products, heel warts and hoof rot would rapidly become the top animal health and welfare concern in any farms. While some conventional farmers use antibiotics or dangerous products like formaldehyde, most conventional and all organic farmers use safer copper and zinc products treatment for cow's feet. Most effective
salves and sprays contains zinc sulfate, zinc oxide, and/or zinc chloride. For some reason, zinc sulfate was not allowed for a few years, which is part of why I'm here, I don't want copper sulfate to go by that road. And foot problems are painful and animal welfare suffered on our farm because there was some products we were using but we're not allowed to use anymore. Most everyone would also agree that the best hoof programs alternate products and active ingredients. For example, our hoof trimmer advised us to use a product called PINXAV, it's actually a baby diaper rash ointment. We use it on her own children, even as infants. I submitted it for review and all the ingredients are acceptable except for the active ingredient which is zinc oxidize. Most good hoof healthcare options are not allowed because zinc oxide, zinc chloride, or zinc oxide origin are their active ingredient. This is very confusing due to the fact the zinc oxide and zinc chloride are an acceptable organic feed ingredient. If I can feed these
products. Confusing, why can't my cow step in it? Copper sulfate is good and is most commonly used as a foot bath ingredient. Most organic farmers use this in foot baths as stated earlier, because the zinc options are not allowed and it is important that we still have this, however, we don't feel copper is as effective as zinc products when sprayed or wrapped on feet. And also when using only copper, it can build up in the soil and can cause copper toxicity. On the other hand, zinc is always deficient and beneficial in our soils and the cropper removal rates are much higher. And I've never heard of zinc being a problem in as far as in the soil. So from my perspective, I think it'd be very beneficial if we can have zinc oxide and zinc chloride as well as copper and zinc sulfate and they are acceptable for feed, it seems like they should be okay for feet.

CHAIR POWELL-PALM: Thank you for your comments. We don't get -- we haven't heard much about livestock. So this is great. Kayla, please
go ahead.

MEMBER SMITH: I don't have a question, Nate. Don't chastise me. I have a comment.

CHAIR POWELL-PALM: Again?

MEMBER SMITH: So zinc sulfate was in the same place before this copper sulfate being allowed and the zinc sulfate not being allowed. And so it was petitioned. So anybody out there listening who is wanting to petition those, that's how we got them onto the list. So that could be submitted as a petition to the Board and we will go through a rigorous review process and we will vote them on or off so that let's someone to try to get them petitioned on. But zinc sulfate was in the very same space before where there were certifiers who were allowing it based, again about being able to feed it to animals, it's a helpful mineral. And so we were like because see that to animals, it should be allowed as a topical and several certifiers got in trouble for that. So hence, the petition process and now it's on the
list.

CHAIR POWELL-PALM: So there is the path forward. All hope is not lost. So yes, the team at Organic Valley can probably be a really great resource to write up a petition for us as well. So thank you so much for your comments today. Really appreciate your time. All right. Moving along. We next have Alan Lewis, followed by David Meyer, and then Jackie DeMinter.

MR. LEWIS: Nate, the moment you said that I lost video so I'm going to continue with audio only; is that okay?

CHAIR POWELL-PALM: That's just fine, thank you.

MR. LEWIS: Sorry about that.

CHAIR POWELL-PALM: No worries.

MR. LEWIS: Alan Lewis from Natural Grocers and I have some comments from 36,000 feet. I spent a good part of last year working with IFOAM -- Organics International under the Organic 3.0
rubric, with the leadership from five different
continents in some very complicated midnight
conference calls. But it really is highlighted
the difference between U.S. framework for organics
versus the global organic movement, which is so
focused on community and equity and sovereignty
and security as the long-term values. And I just
want to drive this point home when we look at
hydroponics in the U.S. I remember speakers
talking about the four trophic levels of
hydroponic, and how that qualified as a active
biological system. But really it's for
catastrophic levels of hydroponic because we have
270 berry operations in containers in Mexico, 75
tomato operations of Mexico. And these cover
miles of land with hoop houses. It's not
well-paid, humane, fair, just labor. There's no
sanitation. They're using water that there is not
enough of. And they're returning it polluted to
the landscape. Those trophic levels, but there's
nothing for us to brag about. And that is
primarily CCOF Primus in berries, CCOF Primus tilt and tomatoes. So why does that matter to us? It's just Mexico. But we're losing small holder organic farmers in the U.S. because the price premium is disappeared. It's now a disadvantage to be an organic berry or tomato grower because you will see side-by-side an identical product for $1 less per pint, $2 less per pint on the shelf. So retailers like Natural Grocers can't sell real berries because our competitor next store is selling the hydroponics. This is broken our system. And IFOAM International looks at the U.S. as a cautionary tale, not as a leader and not as a partner in many ways. It's very much a cautionary tale. Lastly, now we're moving in a synthetic biology. You've heard the buzzwords: tools in the toolbox, science-based policy, yada, yada, yada, gene-edited seeds, seed coatings, RNA applications. Those are all science and we can do science state policy around them, but we can't do science without ethics. And look at
hydroponics as a broken system of ethics for what we've done to ourselves by not really addressing the consequences. The concentrations of wealth, ownership, and control in just that sector have overwhelmed us. And that is my comment. Thank you, Nate.

CHAIR POWELL-PALM: Thank you so much, Alan. Any questions from the Board? Hearing that, I'll just pose, right at the end there, Alan, concentration in ownership of means of production for agriculture. I had mentioned yesterday that it's actually quite tricky and a lot of my world, a lot of rural America to find organic products. I believe you had said, Go to your local co-op or your Natural Grocers. Those only exist in the biggest cities, at least in Montana. So where -- how do we get to this point where honestly gas stations are carrying organic. How do we make it so that where people buy food is where organic is available? How do we grow this so that it's not niche, it's not only in our biggest cities that
we can find organic, but it becomes the norm? What do we need to do?

MR. LEWIS: Well, we made a deal for the devil to get non-seasonal production down in Mexico and other places to get a year round supply that's cheap and that's pushed into the distribution system like McLane or Shamrock or U.S. Foods that's going into convenience stores and small groceries. So the cost of that is we no longer have local food systems. So that grocery store is only buying from a distributor who's sourcing globally. And at the same time, even if that grocery store manager runs a farm and he wants to grow berries, he has no or she has no ability to sell those berries at the store. We've broken that system from logistics, to local health ordinances, to consumer acceptance of local goods.

That's the right question, but we really need to look away from the U.S. to answer that question for how to move forward, or I would say look to the Real Organic Project, who does bring ethics
into science-based policy, and does embed culture and agriculture into communities, as opposed to just thinking of it as a commodity with a specific set of characteristics.

CHAIR POWELL-PALM: Thank you for your comments today. Really appreciate your time. Next up, we have David Meyer followed by Jackie DeMinter, and then we'll all take a well needed break. So please, David, go ahead.

MR. MEYER: Hello, everyone. And thank you for your time. As a former farm kid, I want to just say thanks for all the Board members. I grew up on a small farm in Central Wisconsin, I really appreciate and I understand how much time and effort it takes to serve on the Board and this is a very important topic. I'm going to talk about pectin, so change up a little bit here. We're going to talk about food ingredients and specifically about pectin, non-emanated forms of pectin. On the national list of non-organically produced agricultural products allowed as
ingredients in or on process products labeled as organic.

Next slide, please. Pectin is used in a variety of food applications. It's found in almost all plant material. However, it has a really unique functionality that we use for particular products. Jams and jellies is the top one. Pectin is the only ingredient that's allowed in standard of identity products that can be sold as organic, and it provides that unique, spreadable texture that we're used to. It's also used in bakery, breads, cakes, muffin. It enhances the freeze possibility that increases volume in those products, it's very important. In bakery and fruit yogurt preparations, this is an alternative to starch. It creates texture and it allows baked stability so you can bake those without having it fall all over or leak out into the oven. It delivers better fruit flavors compared to starch. We use it in yogurt white mass as well to create body and mouth feel. It's using a variety of
beverages from fruit juices to coffee beverages. It protects proteins from having aggravation as their process. And then of course, confectionary too. We all love gummy products and pectin can be used there as well.

Next slide, please. So pectin is very unique, in the gel texture it provides, the protein stabilization it provides, the mouth feel in beverages, and the accessibility. You can see some of the other hydrocolloid alternatives that we have, carrageenan, locust bean gum, guar, among others, none of them create exactly the same attributes that we see in pectin.

So I just want to go ahead one more slide and I'm going to answer this. The availability of organic pectin. So organic fruit we see all over, right? But the vast majority of organic fruit is sold as whole fresh fruit. And therefore, there is neither the quantity nor the quality of organic peel available to produce organic pectin commercially. And that's why we need to have it
on this list. Thank you very much for your time.
I appreciate it and I'd be happy to answer any
questions.

CHAIR POWELL-PALM: Thank you for such
a clear presentation. I believe, Brian, did you
have a question? I saw your hand go up for a sec.
MEMBER CALDWELL: I did. It's about
organic availability and I guess I would like to
ask David. Thanks for your comments. And are
there other sources besides citrus peels for pectin
like, I don't know. Well, anyways, are there other
ones and maybe could be supplied organically, I'm
wondering.

MR. MEYER: There are other sources.
I mean, apple would be the other major source that
we would see. However, the apple organic market
also is sold primarily fresh as whole apples. So
anytime it goes to the consumer in a whole fresh
fruit option, then we don't have the opportunity
to get the pectin out of that. So that is also
problematic. There's pectin in sugar beets also,
but it creates some problems in that different pectins act differently. So citrus fruit is the best choice as far as creating a strong gel for the jams and jellies that we're looking for. And that's why it's used. You know, there are some other sources but different pectins definitely react very differently. And at this point, there just aren't enough, you know, organic sources of any of those others to use.

MEMBER CALDWELL: Thanks a lot.

CHAIR POWELL-PALM: Thank you for your comments today. Appreciate it. All right. Next up -- Dilip, go ahead. I'm sorry.

MEMBER NANDWANI: Sorry, I took a second to raise my hand.

CHAIR POWELL-PALM: Not a problem.

MEMBER NANDWANI: You know, the pectin we probably all know that it's a cementing material between the cell wall -- probably, I mean, I see you're nodding and I think we all know that. So organic sources are limited and I'm just wondering
that, what can you tell us a little bit about its manufacturing or the processing from the fruit such as you mentioned oranges or can you just quickly tell us a little about that? Thanks.

MR. MEYER: About how it's manufactured? Is that what you're --

MEMBER NANDWANI: That's right. How do you --

MR. MEYER: Yes. So I'll just give you a citrus example because that's primarily where we get most of our pectin. So the citrus fruit industry, they harvest the oranges, or limes, or lemons. The first thing they do is juice them. So they take that juice, and that juice is concentrated, used for fruit juices, those things. The next thing they would do is take out the oil. So citrus oil can be used for a lot of different things. The primary use in the U.S. is for like sodas, right? So they extract that as well. Next, we have -- you would take that and then that's where -- so you have, what's left is cellulose,
hemicellulose, and pectin. And then we would extract that pectin out of that matrix of cellulose and hemicellulose using a low acid and heat extraction, okay? So that's how we would get it out and then it's dried down from there and sold as pectin.

MEMBER NANDWANI: Thank you for that information. I appreciate that.

CHAIR POWELL-PALM: Yes. Thank you, David. Next up, we've got a Jackie DeMinter and then we'll break. After the break, we have Mike Dill, Adam Lazar, and then Michael Hansen. So Jackie, the floor is yours.

MS. DEMINTER: Good afternoon. My name is Jackie DeMinter. I am the certification policy manager at MOSA. Thank you for your work and for providing this meeting in a virtual format. We certify over 2,000 organic operations throughout the U.S., including over 1,750 with
crops, 730 with livestock, and 325 handlers. I'll summarize our written comments on sunset materials and highly soluble nitrogen fertilizers. I'll highlight just a few sunset materials. Livestock materials, glucose containing products are typically used as an electrolyte in our experience, we have almost 20 inputs containing copper sulfate used by approximately 115 clients. Lidocaine is one of the most common pain relievers in use by more than 100 clients primarily for dehorning, crop materials, biodegradable, bio-based mulch film.

We are not aware of any 100 percent bio-based, biodegradable mulch film. Due to this, no products are in use by most clients, however, more than 210 MOSA certified operations are using a synthetic plastic mulch. We encourage review of products available on the current market to ensure potential for compliance with all four review criteria and if none are available, sunsetting the listing. Humates, humic acids, and fulvic acid are very common ingredients in crop products; 94
inputs of humates as the ingredient are in use by hundreds of MOSA clients. Almost 60 inputs contain humic acids, approximately 45 inputs contained fulvic acid. Fulvic acid review criteria differs than that only non-synthetic acids or water are allowed as extractants, as for humic acid, alkaline extracts are also acceptable.

Micronutrient use is very common. More than 200 micronutrient inputs are in use by hundreds MOSA clients. Of the handling materials, diatomaceous earth, nitrogen, carbon dioxide, sodium phosphates, casings, and pectin are the most common materials MOSA clients use. Finally, regarding highly soluble nitrogen fertilizers. We appreciate the NOSB working to solve concerns before they may develop. However, in our work we have not experienced sodium nitrate being used in a manner that is concerning nor do we have any clients using a natural ammonia extract product. From our perspective, it looks like the proposal will impact guano and sodium nitrate in use by MOSA
certified clients and would create additional steps in our review work but not change the inputs MOSA clients use. Ultimately, we want to maintain our ability to discern when organic integrity is negatively impacted or threatened by the use of these materials without any additional unnecessary review work. In closing, thank you for the long hours you commit to this work and thank you for the opportunity to comment.

CHAIR POWELL-PALM: And thank you for your time preparing those comments today. Any questions for Jackie from the Board? I have one for you, Jackie. I have two actually and I realize we're about to break, so pressure's on.

MS. DEMINTER: Okay.

CHAIR POWELL-PALM: How do we get -- what is it that's holding us back from MOSA realizing 4,000 clients instead of the current 2,000? What is it that will allow us to make it so that organic is such an obvious route?

MS. DEMINTER: Boy, that's a tough one
to answer, Nate. Capacity comes to mind right away. As far as, you know, expanding the capacity to do the work, the boots on the ground, the inspectors, the reviewers, the career path for individuals that could stand from development work.

CHAIR POWELL-PALM: Okay, So human capital; we are on that. Absolutely. Could you clarify just a little bit? In there you were saying that you appreciate the opportunity to monitor organic integrity for highly soluble nitrogen products but don't want additional undue review work. What review work do you do now for sodium nitrate? And is there a way to make it fairly easy to analyze?

MS. DEMINTER: Well, I don't know the answer to that second, and I don't know of how easy to analyze necessarily. In our experience, and I detailed this in the written comments, the inputs that we see and used by our clients, not speaking for all areas of the United States by any means
are not of concern because the sodium nitrate is usually an ingredient in a multi-ingredient product in a vast amount of inputs in use by clients. So we can look at the file, look at their input inventory, and see that they're not abusing the use of this input. As far as work is that we do right now, since we do not have the 20 percent restriction effective anymore. We don't actually measure that or do the math, but we used to do that. And in every case we never once discovered that it was in use in amount greater than 20 percent, even though we put the numbers on the paper, and did that work. We just -- in our experience, don't have the concern for abuse or overuse of a highly soluble nitrogen fertilizer by our clients. There are a couple of clients who use like a 16-0-0 product. But again, it's one of many, many products, and they're using it in extreme times or when soil temperatures aren't warm enough or things like that as we've heard other commenters saying.
CHAIR POWELL-PALM: All right. I appreciate that. Okay. Thank you so much for your comments today.

MS. DEMINTER: Yes, thank you.

CHAIR POWELL-PALM: So it is just almost to the top of the hour, so let's come back in 15 minutes. And after our break, we're going to start with Mike Dill, followed by Adam Lazar, and then Michael Hansen. And so come back at 12 after the hour. All right. Thanks, everybody. See you in a bit.

MS. ARSENAULT: Thanks, Nate.

(whereupon, the above-entitled matter went off the record at 1:57 p.m. and resumed at 2:12 p.m.)

CHAIR POWELL-PALM: And we're back, 12 after the hour. Hope everyone was able to grab a snack and get ready for some more input from the community. All right. So first up, we've got Mike Dill, followed by Adam Lazar and then Michael Hansen. All right. Floor is yours, Mike.
MR. DILL: All right. Thank you. Good afternoon, everyone or good morning. My name is Mike Dill and I'm representing the Organic Produce Wholesalers Coalition. The OPWC is comprised of seven businesses that distribute fresh organic produce to customer located across the United States and internationally. I'll be commenting on technical support for NOSB and modernization of supply chain traceability. On technical support, OPWC recognizes both the work load and lack of compensation limit the pool of people who are able to serve as volunteer members of the NOSB. And we support the NOSB receiving more technical help. That said, the work of any technical supporter should be subject to conflict of interest declarations and confidentiality agreements. We feel there are some types of technical support that are not appropriate to support the NOSB, and those include but are not limited to serving as the primary author of an NOSB or subcommittee document, initiating polls of
stakeholder groups, input into the subcommittee or board decision-making process, and communications on behalf of the NOSB or subcommittee.

Related to modernization of supply chain trace ability. We again greatly appreciate the CCS’s focus on traceability in fraud prevention. We support the standardization BOLs, but strongly oppose the requirement to list acreage on certificates for produce operations. In the fall 2021 proposal on this topic, the subcommittee stated this, the NOSB recognizes the need to not burden organic farmers, certifiers, or inspectors with additional paperwork. OPWC asserts that this proposal would result in heavy paperwork burden for specialty crop growers and buyers. Requiring acreage on certificates, especially by crop, would lead to more unnecessary non-compliances for certified operations, that failed to disclose every change in planting quantities. A compliance issue that is not related to organic integrity.
This in turn would disrupt and slow down product movement through the supply chain. Additionally, it would shift the focus of inspections even further toward paperwork rather than on practices and organic controls. We provide more detail about this burden in our written comments and I encourage you to consider them when finding future work on this topic.

I'd like to use the rest of my time to again bring forward OPWC's suggestions for building out handling standards at 205-270. We acknowledge that there are many competing priorities at this time, however we feel that the concept should be high on the list as it would positively impact every certified operation, as well as provide a guide for the currently uncertified handlers that SOE will require become certified for the first time. We also note that there are elements of handling and at least 10 to the 23 backlogged NOSB standard recommendations. Creating distinct handling standards offers an
efficient way to address these points systematically while clearing the backlog. Comprehensive handling standards will benefit certified operations, inspectors, and certifiers by clarifying record keeping requirements related to handling activities, as well as organic controls between harvest and processing or distribution. Standards also provide the basis for holding certified operations accountable for all their handling activities. It is our hope that the CACS will assess our proposed handling standards and consider them for future work agenda item. Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments, Mike. Jerry has a question.

MEMBER D'AMORE: Yes, sir. Mike, thank you very much for the comments today and an extra shout out for your team and the written responses that you gave to the NOSB technical support discussion document. Your answer those questions that we had in there doesn't even need
review, there were so thorough. But I'd like to focus on a sentence that you had in the preamble or the opening paragraph and maybe my question doesn't have an answer because maybe there was this one sentence is so self-understood that there's not much expounding that you can do about it or on it. In there you write, or one has written, we recognize that both the workload and the lack of compensation limit the pool of people who are able to accept nomination for the NOSBC. Now again, that's in my mind, I just -- a true and obvious statement. But as you wrote that, was there a path that you took, you know, a analysis that you made? Is there more meat that you can put on that particular subject?

MR. DILL: I really wish we could. I think it's one of those things that we all as a community understand is an deterrence from being on the Board. And I know there's limitations to, you're prohibited from compensating folks, but maybe there's other ways around it. We haven't
put that at top of our agenda to really, you know, assess alternatives. You know, there likely are, maybe there's ways that we could I'm just throwing something out theoretically, but maybe someone that's a crop grower and that they get free certification if they are on the NOSB or, you know, maybe we can get creative with it. But really we just, you know, we feel it's unfortunate that the workload is so heavy and it requires so much time in that it does require kind of a sponsor, you know, in organization like ourselves, you know, we could absorb the cost to have someone sit on the NOSB, but a small farmer, you know, definitely can't. There's too many competing priorities. So I just, I think it's fair to acknowledge that and we state it here as a way to say that we definitely support NOSB members having some sort of support system that might help reduce that workload so that it can be more manageable.

MEMBER D'AMORE: Well, you did a wonderful job with, perhaps an awkward question
that was so open-ended. This is, I've been going
into my third year on the Board and every single
session that I participated in, our whole
self-evaluation of diversity, inclusion, equity.

You know, we're pretty hard on ourselves there
and then the community rightfully so, is was pretty
hard on us as well. And I found that one sentence
to be extremely meaningful and you filled in some
blanks there, but extremely meaningful in terms
of our future capability, should we get something
like put together to address exactly that issue.

So I see a lot of the document and I can't thank
you folks enough for being so diligent in all that
you've done with it. I will share with you that
today --

CHAIR POWELL-PALM: I'd like to
quietly cut you off, Jerry. Only for time.

MEMBER D'AMORE: One time. Okay.

CHAIR POWELL-PALM: Go ahead, go
ahead.

MEMBER D'AMORE: No, I just wanted to
comment to Mike that universally, there's nobody in opposition to this, but there's a thousand different ways and suggestions of getting it done. And that makes it challenging. And when people are willing to put so much thought into it, it's very helpful. Thank you very much.

MR. DILL: And we thank you for your time and dedication.

CHAIR POWELL-PALM: Kyla has a question.

MEMBER SMITH: Hello, thanks for your comments. I was wondering in regards to the revision to the handling standards if you felt -- if this were to become a work agenda item. If you felt it was important to have SOE across the finish line first or if work could be done prior to seeing the finalized form of that rule?

MR. DILL: That is a great question and one that we have been, you know, kind of grappling with a little bit. It's like, how hard do we push
for this without knowing what SOE is going to look like exactly. As you know, that's where, you know, handling standard concept originated is to our response to SOE. And I think we all just want to see what that looks like. So I think right now is a good time to assess it as a future work plan. And, you know, I think myself and the rest of the community, has our fingers crossed that we'll see SOE pretty soon. But I -- we just feel that it's so important to get clarity around this, and really, you know, move forward. I don't personally think that SOE is going to have a lot of the elements in it that we are asking for. And I think a good example is like sanitation. We talked so much about sanitizers on the list and that's really all the -- the only place they appear. And then in the standards it's preventing commingling and contamination. But wouldn't it be great to have a set of standards or a portion that talked about what is required for sanitation, intervening steps. And you know, just ways that
limit the -- eliminate the need for, you know, certifier interpretation or review of like a SOP for each, you know? Because what we're doing right now is we submit an SOP and the certifier says yes, that looks good or it doesn't based on your preventing contamination, but we don't know what that really looks like. So and then as it relates to the backlog of, you know, NOP standard recommendations, I feel that maybe it's a good idea to try to implement handling standards at the same time or even before doing that so that we don't have to, you know, consider handling portions of each one of those you know, standards as we work through those.

CHAIR POWELL-PALM: Thank you for your comments, Mike. All right. Next up, we've got Adam Lazar, followed by Michael Hansen, and then RedElisa Mendoza, I don't think we're seeing you yet. And Carol Walker, if you can make yourself known. That'd be great. Okay. Adam, please go ahead.
MR. LAZAR: Thank you very much for having me, everybody. My name is Adam Lazar. I'm the founder and CEO of Asarasi. We're a plant source water company. And I'm going to show with you for a few minutes just how we can advance 20,000 North American farmers becoming organic certified and changing the face of the organic industry by talking about something really simple called water.

Next slide, please. Now, we know water is an enormous global issue that affects farmers and everyone right here at home from consumers and households alike and with stage 2 tear water restrictions in the U.S. on the Colorado River. There's never been a better time to find alternative sources of pure water.

Next slide, please. I discovered a byproduct of the maple industry, which is a sugar free maple sap, which was elementally pure water about ten years ago and I started leveraging this water to bring this into the bottled water
industry. And today we are the only certified organic plant source of pure water in the world through NOFA and Baystate Organics. And we're accelerating our growth by delivering our products all over the world as a trustworthy source alternative for water.

Next slide, please. Now, farmers harvest their maple crop by tapping maple trees and we all know this tradition goes back hundreds of years. They now are processing their maple sap with reverse osmosis and taking the sugar molecule out of the sap. And for every gallon of maple sugar that they concentrate by this by this process, they consolidate about 49 gallons of a pure water byproduct that they throw away. And this is where we come in and buy this byproduct from these family farms, advocating on their behalf to make double their income on their existing maple crop with very little extra labor.

Next slide, please. So from a purely analysis perspective, all water that comes from
a municipal spring, lake, aquifer, any sort of supply is highly chlorinated, highly fluoridated, highly contaminated, polyfill alkalines, uranium and radium-226. And there's no end in sight for the contamination. And this water is exempt as an ingredient in the Organic Program today and being used in all organic food and beverage products.

Next slide, please. So with 1 billion gallons of available tree water, we represent over a 110 family farms to date, organic certified farms, that double their money on their net income by just simply selling us these pure water by products. And this is a huge advantage for the industry, as well as the organic certification community.

Next slide, please. This can scale to over a trillion gallons domestically alone. And with 20,000 U.S. and Canadian maple farms processing these products, this is a huge economic win for the farms and a huge environmental win for
the groundwater supply. Next slide, please. We make lots of different products from probiotics seltzers, hard seltzers, sodas, teas for Walmart, Costco, and the like. And it's amazing the impact in the reception we've gotten from consumers with our products. Next slide, please. We've even used it to make beer with Anheuser-Busch, zero groundwater beer, plant source organic beer. Imagine that.

Next slide, please. So the problem is today water is the number one exempt ingredient in the NOP by volume estimated. And many products are made from chlorinated PFSA contaminated purified sources. And this exemption disadvantage is 20,000 North American farmers. All these products you see here are organic certified and 99 percent of their product does not even organic.

Next slide, please. And I'll wrap up with this. So I'm asking you to remove the ingredient exemption for water, allow the product
formulations to be enhanced. The purity claims for water-based organic products accelerates thousands of North American farms are advantaged. Consumer confidence and authenticity is increased. Manufacturers realized authentic claims. Groundwater is saved and you-all meet the sustainable development goals you're after and make the world a better place. So thank you for allowing me the time to share this really interesting and highly sensitive topic with you. And I welcome, I'm sure that myriad of questions you were have. Thank you.

CHAIR POWELL-PALM: Thank you for your comments. Any questions from the Board? See none. We appreciate your time -- oh, Amy, go ahead.

MEMBER BRUCH: Adam, I just was going to say thank you for bringing this to our attention. I really appreciate it. Really interesting.

MR. LAZAR: Thank you very much.

CHAIR POWELL-PALM: All right. Thank
you, Adam. Appreciate your time today. Next up is Michael Hansen, and then RedElisa Mendoza, and Carol Walker. So please go ahead, Michael.

MR. HANSEN: Yes. Can you hear me?

CHAIR POWELL-PALM: We can.

MR. HANSEN: Yes, you can. All right.

So my name is Michael Hansen, I'm a senior scientist at Consumer Reports, which is an independent non-profit, nonpartisan organization that works with consumers to create a fair and just marketplace. We have over six million members. My comments today are going to focus on the materials some committees excluded methods and proposal. We have been supportive of the excluded -- of the subcommittees excluded methods work which has spanned almost a decade. And we have supported all the proposals that the board has unanimously passed to date. We strongly support the present recommendation, and that's where the -- that
recommendation is for the NOP to develop a formal guidance document to include the definitions, criteria, and excluded methods tables that have been developed by previous board proposals. And we also agree with the addition and the definition for both self fusion and protoplast fusion that are in that proposal. But there's one small change that needs to be made to the definition, and that's where they refer to techniques utilizing recombinant DNA. That's old terminology from about 20 years ago when basically what they were doing was moving DNA between organisms. But we now know that you can actually not only manipulate DNA, you can manipulate RNA as well. And so, rather than just use the term, Recombinant DNA technologies, the proper terminology should be, In vitro nucleic acid technologies. So in the definitions where it says, Techniques of recombinant DNA, those should be changed to, In vitro nucleic acid technologies, because it has, as I said, I would point out that with gene editing, for example, for
CRISPR, which we're actually engineering is messenger RNA, right? That there's a guide RNA. And I would also point out that in the future, they're probably going to be engineering of ribosomal RNAs and probably transfer RNAs. And so that's why we think it's important that you change the definition. And that makes it more comprehensive and it also is the definition used by Codex Alimentarius, which is a global network. And I would just point out that the Codex guidelines prevent food production, processing, marketing, and labeling of organically produced foods used this language, so it would be good. And then finally, we also support the change in the current regulation 7 CFR 205.2: Terms defined, so that the definitions of excluded methods and everything in the NOSB proposal has -- should be added to regulatory language, so that can be used at a future as a regulatory framework for the class of excluded methods, because these technologies will continue to evolve. And as I said, one day
they're probably start engineering RNAs and
transfer RNAs. Thank you.

CHAIR POWELL-PALM: Thank you so much
comments. We have a question from Dilip.

MEMBER NANDWANI: Again, this is not
a question, just a comment and echo. This is very
well presented, Michael. Really appreciate your
thoughts and I agree with your comment that RNA
and DNA they are absolutely nucleic acids and
that's a very valid point. Thank you for your
comments, again.

MR. HANSEN: Yes. I'd just like to
quickly say that we saw this was happening, and
so that's why I was on the delegation. We made
sure that this definition got accepted globally
at Codex because we saw that this was going to
happen that one day, they would engineer these
other things. So thank you.

CHAIR POWELL-PALM: Brian, please go
ahead.

MEMBER CALDWELL: Thanks, Michael for
all your work on this amazingly complicated topic. I'm just looking to the future. And usually if you have any ideas about how we can enforce and monitor new varieties that may come about using some of the genetic editing techniques that maybe are not, you know, it's not on the label, it's not necessarily disclosed in the variety description or any other place. Or maybe I'm wrong. Maybe that's not going to be the case, but I'm just curious what your thoughts are on that.

MR. HANSEN: While the -- this is instead of whether you can detect the changes and I'll say yes, if you have the before and after, you can absolutely detect those changes because even when they use gene editing like CRISPR, it doesn't make just that one edit, it makes all these other edits which actually can be detected, because it should be pointed out, people that are developing these technologies they need a way to detect it as well, so that they can stop others from quote, infringing on your intellectual
property. So they try to tell you that for example, with CRISPR, there's no way to detect it. That's just not true. If we have the before and after, it can absolutely be detected. And the companies that are developing this know this because that's why they always make sure that they can enforce their intellectual property.

MEMBER CALDWELL: Great, that's really good to know. Thank you.

CHAIR POWELL-PALM: Any other questions from the Board? All right. Thank you so much for your comments, Michael.

MR. HANSEN: Thank you.

CHAIR POWELL-PALM: I think we're going to be with RedElisa Mendoza and Carol Walker. I don't think we see on, please make yourself known if you are otherwise, come back. Next up will be Doug Currier, followed by Malaika Elias, and then Heather Spalding.

MR. CURRIER: Good afternoon. Good morning. Wherever you are. My name is Doug
Currier. I'm the technical director at the Organic Materials Review Institute, and I'm going to talk today about the recommendation on highly soluble nitrogen fertilizers. So my comments aim to provide examples of how the use of the term or the generic term nitrogen and the proposed standards revision could need added clarification, when assessing fertilizers that are coming right in, at that three to one, carbon to nitrogen ratio.

As discussed in our written comments, the term nitrogen is likely most commonly understood to mean total nitrogen. Total nitrogen is the sum of ammonia -- organic nitrogen, such as amino acids, naturally occurring urea and proteins, nitrate and nitrite. Of these nitrogen species, soluble inorganic nitrogen such as ammonia, nitrate and nitrite, are those for which NOSB has documented their concern. The concern being that the use of these materials goes against the principles of organic production. Acknowledging that Soluble inorganic nitrogen is the basis of concern, could
help stakeholders understand which materials are at higher risk of violating the proposed C to N ratio. Focusing on inorganic soluble nitrogen levels can also help with dealing with materials that border at or around three to one carbon to nitrogen. Examples are included in our written comments but I'll give one now.

The C to N ratio of bloodmeal could border at or below three to one carbon to nitrogen based on lab reports on file and armory, when using total nitrogen as the nitrogen value. The nitrogen in bloodmeal, however, will not come anywhere near 100 percent inorganic soluble nitrogen, which suggest just using that soluble inorganic nitrogen value in the ratio is going to provide a clearer picture of the material, not a concern. Fish products and hydrolyzed soy are two other examples explored in the written comments. So the need for technical support for certain buyers and growers is an important factor to ensure successful implementation of standards revision
that addresses highly soluble nitrogen products. While I may share concerns raised by others regarding the burden placed on certifiers, growers, material review organizations to ensure materials below three to one C to N ratio are identified, and their use restricted. We believe that with clear messaging from NOSB, which answers the why behind the standards revision recommendation, combined with effective and accessible technical support outlets, it is possible to enforce the proposed standard addressing these low C to N ratio materials. Thank you.

CHAIR POWELL-PALM: Thank you very much for your comments. Any questions for Doug from the Board? Amy, please go ahead.

MEMBER BRUCH: Sure, Doug, thank you for your time today and providing the written comments. And I appreciate your thoughts on this solubility piece versus the carbon and nitrogen ratio. I just had a question, kind of overall
helpful to hear your perspective on components of a blended fertilizer. I know in previous OMRI comments you mentioned about isotope testing on finished products is hard to really deconstruct those ingredients and I know, OMRI, you guys, work on implementing the NOP guidance on liquid fertilizers for use. So you're doing increased level of inspections on those products that have a high component of nitrogen. So I just wanted you to maybe talk on that subject of the blended fertilizers.

MR. CURRIER: Yes. So we, in our review, we're getting the formulation statement, we're getting the materials that are used in the products identified. And within those formulation statement review, we can identify nitrogen fertilizers, and we can then look at whether or not those nitrogen fertilizers are below three to one carbon to nitrogen or below. The tricky part becomes how to convey our findings to the public. And one way we -- the main way we do
that is through a restriction and we could develop a restriction that conveys, you know, what we've found to -- in our review. Meaning, we could say, you know, this product formulates with a material that is below, you know, three to one carbon to nitrogen ratio. And give some way for the end-user, whether that's the certifier or the grower to know that they have to think about the product more, the fertilizer more in regards to limiting its use. So I guess, that's one thing that comes to mind in regards to using a restriction that we can convey findings in our review and blended fertilizers are very common, and we would -- I would imagine we would be able to look at that level within the blend in order to know which are materials of concern, which are not. And then restrict.

MEMBER BRUCH: Thank you, Doug. Appreciate it.

MR. CURRIER: Sure.

CHAIR POWELL-PALM: Thank you for your
comments, Doug. Oh, Dilip has a question.

MEMBER NANDWANI: Oh, very quick.

Doug, I am a new member, so please bear with me if I'm just trying to understand. Can you tell us a little bit about how you enlist a new product or material in OMRI list. The reason I'm asking is let's say humic acid and folic acid, they are two example I wanted to ask you. There are tons of, you know, companies they're also making the same product, same name, they are manufacturing or processing, whatever you want to call is the same. So I'm just wondering, some humic acids are accepted and they're listed in OMRI and some they are not. So can you tell us a little bit about that. How do you make this -- you know, the distinction that this has to be listed on the national list and this, you know, we cannot accept that? Thank you in advance.

MR. CURRIER: Yes. So really quickly, you know, we go through a thorough review, that includes, you know, the formulation statement
review, table review. We're looking at manufacturing processes, lab analysis, if needed in some cases, with humic and folic acids, you know, there's, you know, a synthetic allowance at 601 for humic acid extracts. You know, we are looking at the extract in use, looking for fortification potential. And so there's a variety of ways that we could get to a recommendation to allow versus prohibit. One would end up on the public list, one wouldn't so you know, those are just some of the really basic kind of approaches that we use and could end up with a decision that seemingly is in conflict because it's, you know, seemingly the same material. But yes, something in there's going to be driving us towards a prohibited decision.

MEMBER NANDWANI: This comes from the NOSB Board recommendation to you also. So that also keep in consideration or you have your own methods and process as you just explained?

MR. CURRIER: Yes, we would certainly
like to that NOSB discussion to kind of inform our
thinking about, you know, our review approach.
Ultimately, you know, whatever's published in the
regulation is what we're basing our standards off
of.

MEMBER NANDWANI: Thank you. This is
helpful, I appreciate that.

MR. CURRIER: Absolutely.

CHAIR POWELL-PALM: Thank you again,
Doug.

MR. CURRIER: Absolutely. Thanks.

CHAIR POWELL-PALM: Moving on, we'll
have Malaika Elias, followed by Heather Spalding,
and then Oren Holle.

MS. ELIAS: Can you hear me?

CHAIR POWELL-PALM: Yes.

MS. ELIAS: Hi. My name is Malaika
Elias. I'm a food and technology campaigner,
Friends of the Earth. I just want to say thank
you for the opportunity to provide comment on
materials subcommittee proposal on excluded methods. Friends of the Earth supports recommendations at National Organic Coalition, not seen to improve its resource, excuse me, to improve its response NOSB recommendations. In addition, Friends of the Earth would like to strongly urge the materials subcommittee to include a few more techniques to the excluded methods list. Cell fusion and protoplast fusion, and that these techniques be defined in reference to the in vitro nucleic acid techniques. We really wanted to ensure that we have an organics certification which truly addresses emerging biotechnologies and new techniques being applied to agriculture. In November of 2016 the NOSB voted unanimously to update U.S. organic standards to exclude ingredients derived from the next generation of genetic engineering and gene editing. As the NOSB has established, these new genetic engineering techniques are incompatible with organic and sustainable agriculture. Currently the list of
techniques that are excluded, methods is incomplete and currently NOSB's excluded methods list makes reference to recombinant DNA technologies, and it should be updated to use in vitro nucleic acid technologies, which is consistent with NOSB's other definitions used to determine excluded methods and includes more specific techniques such as RNA and recombinant DNA. So in conclusion, Friends of the Earth supports the improvements of updates to the Organic Standards which will help preserve the integrity of organic classification. And we strongly urge the NOSB to continue to exclude new gene editing and synthetic biology techniques from organic by updating the list of excluded techniques to include the additional genetic engineering techniques.

Thank you.

CHAIR POWELL-PALM: Thank you very much for your comments today. Any questions from the Board?

CHAIR POWELL-PALM: All right. Thank
you so much again. Moving along, we'll next have Heather Spalding, followed by Oren Holle, and then Marie Burcham. So Heather, please go ahead.

MS. SPALDING: Thank you so much. Good afternoon. I'm Heather Spalding, deputy director of the Maine Organic Farmers and Gardeners Association, MOFGA. We're a broad-based community and we're working to create a food system that's healthy and fair for all. We started certifying in 1972 with 27 farms and we now certify more than 500 farms and processing facilities that presenting approximately 65,000 acres of farmland.

And we're also a member of the National Organic Coalition, NOC. We submitted more detailed written comments as has NOC. But today I just wanted to talk about two things.

First, I wanted to thank the crop subcommittee for the great work on the ammonia extracts petition and as you heard from our crop specialist, Caleb Goossen, who spoke a little earlier, we strongly support the proposal to
restrict the use of highly soluble nitrogen fertilizers. The mantra feed the soil, not the plant guides our work and we must be vigilant in protecting the foundational principles of organic farming as more and more natural sources of high nitrogen fertilizers could allow farmers to sidestep the basic requirements set out in section 205-203 of the NOP Standards. The carbon to nitrogen ratio is clear and addresses the issues well and certifiers can enforce it with ease. Our certification staff members indicate that the math is manageable, that Co-op Extension has recommended values for crop nitrogen needs and all fertilizer manufacturers can easily supply MROs with an analysis that includes the carbon to nitrogen ratio. And so with a simple guidance document from the NOP certifiers could easily verify the restrictions. When we've done this, a similar verification for Chilean nitrate in the NOP Standards. And we do acknowledge that this would create some additional work for certifiers,
but we feel that we should be happy to accept that additional effort in order to protect organic principles.

The second thing I wanted to highlight is the escalating problem of farmland contamination from sludge containing per and polyfluoro substances, PFOS. This isn't on your workload, but I just really wanted to be sure everyone is aware of what's happening up here in Maine. Farmers are facing the loss of their farmland, their products, their businesses, and sometimes great uncertainty about their health because of extensive contamination from PFOS. You've probably heard a lot about it. Maine is sort of in the spot light right now with farmland contamination and efforts that the state is taking to address it. We just this week, the legislature has passed a ban on spreading sludge. And also is sunsetting pesticides that contain them. I know my time is up, but I wanted to just post in the chat a link to an upcoming webinar because I
noticed this is coming to a neighborhood near you soon. And I think people will really want to know about this and I hope the NOSB will call for coordinated and aggressive action to deal with PFOS at the federal level. So thank you so much.

CHAIR POWELL-PALM: Thank you so much for your comments. Yes, that's huge. And I really appreciate you bringing that to our attention today. Any questions from the Board?

Brian, please go ahead.

MEMBER CALDWELL: Yes. Thanks, Heather and this PFOS things is definitely a big deal. I'm just really quickly, are there issues with accuracy and testing at the parts per billion or parts per trillion level, with PFOS, has that come up or is that sort of well understood?

MS. SPALDING: I can't answer that question. I do know that, you know, just that it is so toxic at the parts per billion, parts per trillion level is calling much more attention to this. There is, I guess you would say lowering
levels of screening levels and threshold levels that are being recommended for contamination all the time. So Maine has set some very strict levels of maximum contamination levels of water. And very much stricter than EPA. But as more and more information is coming to light, the recommendations are that we should probably be lowering them even further. So I don't know the specifics about how difficult or how much integrity there is, I guess if that's what you're asking about the put the practices for detecting these, but that's -- there's just needs to be so much more research, so many more public resources available to set thresholds for, you know, how PFOS moves through the soil and the water, how it's taken up in all different crops, where it is in the different parts of crops. Yes, there's just a huge need for this. And, you know, we've been kind of making it up as we go along in Maine, but we know that there -- that federal action is really what we need.

MEMBER CALDWELL: Great. Thank you.
MS. SPALDING: Thank you.

CHAIR POWELL-PALM: Any other questions from the Board? I'd be really interested to hear if you have any more specific requests from work that the Board could request to get into work agenda or work, just as, you know, the leadership voice of the community that we can be doing on this issue of PFOS contamination?

MS. SPALDING: I do. I have -- we're actually developing sort of a work plan for various agencies in the federal government. So we've been reaching out to our congressional delegation, Maine's congressional delegation. All of the members have submitted a letter to Secretary Vilsack calling for certain things that can be done with USDA. And I would be happy to share that document with you if you haven't seen that. We're also advocating for action, you know, at FDA, at EPA, at, you know, there are many different federal agencies that can be doing a lot to address the problem of PFOS. I could -- I know you're like
really stressed for -- stretched for time, but I could -- what could I do?

CHAIR POWELL-PALM: We could happily follow up. I just want to put that out. I think this is something that is very needing of our attention. So thank you for your -- bringing it today.

MS. SPALDING: Yes. I appreciate that, too. And I guess, you know, the key things that we really are feeling are so difficult, are just like awareness for farmers about when it's safe or when it's no longer safe to even be farming their land because there are several farmers in Maine who basically have had to just pull all their products from the market. They're waiting, they're uncertain, their body burden levels are higher than factory workers at a DuPont plant. You know, their children's body burden levels are extremely high too and we just don't have the data to show like what is an acceptable level, what is a permissible level of PFOS contamination in
various different crops. So we really need that.

CHAIR POWELL-PALM: Okay. Well, please stay in touch. Yes.

MS. SPALDING: Thank you.

CHAIR POWELL-PALM: This is important and thank you for bringing it today. Next up, we have Oren Holle, followed by Marie Burcham, and then Bryce Irlbeck. So Oren, if you're there, please go ahead.

MR. HOLLE: Yes, I'm with you at this point.

CHAIR POWELL-PALM: All right. The floor is yours.

MR. HOLLE: You can hear me okay?

CHAIR POWELL-PALM: We can, yes.

MR. HOLLE: Okay. I'm Oren Holle. I'm an organic grain producer in Kansas, I'm president of the Organic Farmers Agency For Relationship Marketing, better known as OFARM. We appreciate the opportunity to address the members with the NOSB. We especially want to thank
you for the opportunity for virtual participation.

OFARM in a nutshell coordinates marketing programs with producer co-operative marketing groups. My comments today will be of a general nature and we want a first of all commend the National Organic Standards Board for their commitment to the task keeping the Organic Program strong and to advocate for the needs of the organic operations. Finding individuals, particularly producers who are running to serve in that capacity is a challenge. As we search for candidates, our occasions in the past for volunteers to serve, comments have been made to more adequately, enumerate those who accept that obligation. While we don't want these positions to become career-enhancing opportunities, it seems logical that the NOSB could convene a session with current and past NOSB members to assess an established protocol for reimbursement for actual expenses incurred while they need to take the time away from their obligations to their current roles in
organic.

The Board is also to be commended for keeping the pressure on to finally bring the origin of livestock road to fruition. The apparent multi-year time lag and this process points to a more fundamental issue. There's obviously still a disconnect in the basic relationship between the NOSB and the NOP. Issues are addressed, some rules are proposed, and it just gets tabled in a bureaucratic process. Maybe it's time for the NOSB to convene a sit-down with the NOP and the AG secretary to re-establish the purpose of the NOSB to properly interpret the basics of the Organic Foods Production Act. From a common sense perspective, it seems that many of the issues that have gone and may in the future gone to rule making could be solved if we just get back to the basics of proper interpretation of the Organic Foods Production Act. As we understand it, the idea is the fundamental purpose of the NOSB. Considering
the debate on the limitations of synthetic nitrogens, here's how it plays out in a real-world of transition to organic grain production. The larger the operation, the more incentive there is to follow the mantra of using all farm inputs to enhance production outcomes. Relaxing any processes to increase the usage of questionable inputs results in a slippery slope that enhances the model of production that non-organic has followed way too long. The very existence of the capo-type operations in organic bears witness to the way organic principles can be bent to fit their production model. Corporate and sometimes large private interest continuously promote transition of large-scale production units which are the most likely to pursue the shortcuts to basic soil-building principals by using more all farm inputs including questionable nitrogen sources.

Is my time up already?

CHAIR POWELL-PALM: It is. I'll ask you a question to just finish. If you if you can
finish quickly.

MR. HOLLE: I would just add one final thought, the strengthening of the organic enforcement rule must be implemented sooner rather than later. We appreciate the opportunities for input to that rule of development process, and its benefits are already apparent. We ask the NOSB to once again, keep up the pressure to bring this rule to fruition.

CHAIR POWELL-PALM: Thank you. Thank you for your comments today. Do we have any questions from the board for Oren? I have a question for you, Oren. As we look to the growth of the industry, I asked the question yesterday, you know, how do we grow the industry to 50 percent of food in America. But in looking at how organic has been an exceptional example of a grassroots growth with a lot of small farmers, a lot of all size farmers engaging in the certification and building this industry. I hear your concerns about larger operations getting into organic.
What would you say is the key to getting more smaller operations? All sizes of the farmers to see organic as a viable path for themselves and to enhance the transition and increase the transition of farmers to organic?

MR. HOLLE: Well, if you're asking specifically about, you know, the area that I'm familiar with and that would be among the grain farmers. You know, we see them transitioning in and out. And much of that have been due to, you know, the fluctuations in the market potential. You know, we see organic prices dropping and they're gone back to conventional again. We see, you know, organic having from great opportunity like they're all right now, the transition within someone floor because the conventional markets are pretty well established too right now. But I think the basic premises is that one of the questions is there, okay. We're looking forward to the opportunity of the organic premiums and all the
economic revenue that can be generated in the transition. But they're just not sure that it has any longevity as if there were, you know, some degree of assurance that there would be a stabilizing in that market process that would be a big asset. In addition to that, I would say that in the long-term, it's still a matter of education, particularly right now with a high cost of the inputs particularly and all the fertilizers. And of course, chemicals had gone sky high too. They're certainly, you know, a number of them are looking that direction. But there again, you know, if the economics are there and there's some reasonable assurance that's going to be set stability, you know, that certainly would help because most of them are still going to have to sit down with their banker and convince them that the transition is going to be, you know, a viable alternative. Does that answer your question?

CHAIR POWELL-PALM: I think so, yes.

Thank you very much. I appreciate your time today
and your comments. All right. Next up, we have Marie Burcham, followed by Bryce Irlbeck, and then Justin Raikes.

MS. BURCHAM: Can you hear me okay?

CHAIR POWELL-PALM: We can. Yes, please go ahead.

MS. BURCHAM: All right. Thank you.

Good afternoon, members of NOSB and NOP, and my name is Marie Burcham, and I am the policy director for The Cornucopia Institute. Our planet is experiencing extreme stress due to climate change, potentially climate disaster that will fundamentally alter how we relate to our environment. Some of this change is caused by the way we farm. Despite this reality, the USDA seems bent on staying the course with their general support of chemically intensive farming. The NOSB has asked other commenters what it would take to increase organic share of the market to 50 percent or above. What it would take is broad recognition
that commercial agriculture, as we know it, is a failure on all counts. It is more expensive, more dangerous, less socially beneficial, unless nutritious and favorable food is produced. A growing body of scientific research shows that farm assistance designed or managed according to agroecological principles can meet food needs of our society while also addressing other serious concerns. To expand our back marketplace, we need to improve integrity and transparency throughout the agricultural system. The whole organic system must connect to continuous improvement, and we need an organic label to stand for true conservation agriculture as an example for how all farming should be.

The organic marketplace has to solve its existing problems and strive to do better for tomorrow. Of particular concern are issues of consistency, role improvements, and transparency information. For example, a certifier survey on policies for a three-year transition case shows
serious inconsistencies. These inconsistencies encouraged bad actors to cheat the system, pushing industry as a whole away from the goal of continuous improvement. We support technical assistance for NOSB knowing these volunteer roles are heavy lift. Part of that technical support should include expertise and guidance on most recent research, including that presented by public commenters. Additionally, we recognize that the NOSB cannot consider economics and evaluating substances, however the NOP should not let economic factors drive decision-making when there are concerns of environmental or human health. Focusing on staying true to principles of conservation agriculture and maintaining continuous improvement is critical to help the organic marketplace grow.

Finally, we are very concerned about the additions to the PPM that may have the effect of limiting free speech in a federal public forum. The first to personal tax is subjective.
Sometimes comments that are subjective might impugn the character are factual, and free speech protects these kinds of remarks. There are real questions about whether the NOSB can restrict commenters in this manner and we would like to see the USDA's attorneys address these concerns as soon as possible. Thank you very much and welcome to the new members. I hope your time serving on the Board is productive and helpful.

CHAIR POWELL-PALM: Thank you for your comments. Any questions from the Board? Marie, as a -- if I were an organic consumer, what would you say to me as the reason that I should buy organic food? What is going well in our industry?

MS. BURCHAM: There's a lot going well, I believe. The research that's going on right now is really showing that organic food is -- will lower the dietary risk of exposure to pesticides. It also is showing that practices that are common in organic agriculture, such as cover cropping and crop rotation and things like that, are increasing,
not just the carbon sequestration, but resilience of the food system. So these farms are producing the same if not better yields in times of climate stress. And I think especially with the pandemic, consumers are more aware than ever how fragile our food systems are. So that is an important piece as well. And these same practices that are beneficial for climate health are also showing to increase, especially in micronutrients in food.

There's a lot of interesting research and data collection going on surrounding that. And from the Bionutrient Research Institute, I'm really looking for it to them publishing more of that going forward. So I think organic food really is the answer, not just for the consumer who can afford it, but really for transforming our entire food system and being an example, moving forward and it obviously takes a lot of consumer education and there's a lot of anti-organic propaganda out there as well that we need to fight against continuously as a movement. But as time goes on, the research
just gets better and there's so much more we can speak to that is really amazing and really recommends what we're doing here to the rest of the world and to consumers too.

CHAIR POWELL-PALM: Thank you so much for those comments. I appreciate your time today.

MS. BURCHAM: Yes. Thank you.

CHAIR POWELL-PALM: Next up, we have Bryce Irlbeck, followed by Justin Raikes, and then Kris Klokkenga. And Steve Ela always did a great job reminding folks that I -- the chair will be an equal opportunity butcher of names. So I have not said that, but I do apologize if I've gotten your name wrong. Bryce, please go ahead.

MR. IRLBECK: Yes. Thank you. First I want to thank the Board, I know how much volunteer time you've put in and so, I thank you for that and all that you do. And so my name is Bryce Irlbeck, I am a fairly large organic farmer in West-central Iowa. I do consulting on about
80,000 acres of organic throughout the U.S. And so I want to talk about two things today. The first is the highly soluble ammonium nitrogen product, and then the import markets and the organic certification standards and how we see we can improve them. And I wasn't planning on talking about the soluble nitrogen product, but I saw comments from a representative in my state, and I thought it very, very important to make sure in my feelings that I was never more clear that people represented us not in fact don't actually represent us. I want to let you know that I highly support your position at the Board and that contrary to what was said in the comments for me as a farmer it does not provide organic benefits specifically in our state, a lot of these products are being shipped out of the state, and significantly increasing our cost of production, by taking those products off the market and allowing big ag businesses to corner the vital nutrient market that we have to grow and expand and be fruitful and
organic. And I'll bring an example of this. I'll keep it short, but the prohibition of this nitrogen from the words of this comment was limit access to affordable fertilizer for organic farmers and reduce production of organic products and that couldn't be more opposite on my farm, if you'd come out here, I can show you real life how that is the opposite. Right now, we can't get enough chicken manure. It's being hoarded. It's not available to us. It's being kept by some of these large companies. And it's been a very difficult year on that, so I can show you personally on my own farm. Now, enough of that. I thought it was important to bring that to the Board's attention to talk through it from an organic farmer's point of view actually in Iowa.

Now let's go to the import markets. I think one of the things that I've heard in the last couple talks that resonating. How do you increase organic production? And I think one of the things that I see in organic farms as the
volatility of organic and it's created through imports that we bring in at cheaper prices and production. And you could argue back-and-forth that they're organic or not. We all have our views and I think you have a good idea of what they are. But during the low periods it forces farmers out because they import lower priced grain. Right now we're in a good period of organic production because we have higher grain than needs to be for the end-users meaning that the dairies, the food companies. We have $40, 45 soy beans. You know, it's great for me, but I know the bottom side of this is going to be very painful and it's very painful for those injuries right now. If we could find an equilibrium in the middle by bringing in more viable rules to make sure that we do have organic integrity and stabilize the market. I think it's one of the biggest things to increase the production of organic. And we could do that through a few aspects of adding acres to the organic certificate and centralizing crop sales so we
know what is available on each farm. It'd have a 2022 database with that kind of information and technology we have.

CHAIR POWELL-PALM: Thank you very much for all of those comments, that was a lot, so thank you so much. Brian has a question for you.

MEMBER CALDWELL: So I just want to let you we're running out of time there and I just wondered if there were any vital other comments that you wanted to make.

MR. IRLBECK: Yes. So along with the imports coming in and out of fluctuating the market so much that we don't ever create a sustainable environments. We also import a lot of insignificant grains. That seem insignificant if you look at face value, the wheat, the barley, the small grains that really make rotations grow on the farm to be successful in organic, at least in the Midwest, are not viable in our region. So you'll see a lot of farmers just corn, soy beans,
corn, soy beans, which is not a viable long-term rotation because they can't financially or sustainably fit the small grains in if we import them.

CHAIR POWELL-PALM: Amy, please go ahead.

MEMBER BRUCH: Yes. Bryce, just a quick question. Thanks for your time today. It sounds like you work with a lot of transitioning farmers and organic farmers in general. What would you say are the top three barriers to expanding organic production?

MR. IRLBECK: Yes, so I think the top one's instability. I mean, it looks really good right now. But when it drives back down to $6, 7 corn, it's really hard to compete. So finding that stability and then the education part of it, of understanding the certification process and really getting it so it's one process, not 100 different processes each make their own kind of rules. Doesn't have to be exactly the same, but
keeping that across the board at the same and then education. The second one, the certification kind of lining that out a little better than it is today where each one makes their own rules, per se in the fast lane.

MEMBER BRUCH: Thanks.

CHAIR POWELL-PALM: Any other questions from the Board? I have a quick question for you, Bryce. In looking at this kind of whiplash market that we're seeing where we have really high prices, really low crops. Do you have any take on farmers trying to organize in a way that stabilizes the supply chains. We've heard it from two of the folks from OFARM, which is a group of co-operative marketing organizations. Your take on co-ops, your take on how do we stabilize this to help it grow? So that the end buyers have a consistent supply. So that farmers can realize a consistent price and we get away from these extremes.

MR. IRLBECK: Yes. You know, for me,
co-ops are hard. I always believed if you can get two farmers to agree, you can rule the world. No two farmers agree usually in most circumstances. So I think it really comes down to the presentation or the talk that I had is it's really enforcing the integrity of organic because the production that was coming across is, well, previous three years at $4 or 5 or 6 and we see these people pop up when countries shut down, the other country pops up and comes organic. It's just very hard to believe that's organic and they're producing under the same standards, the same living, the same type of stuff that we're doing in the U.S. that you saw a lot of people drop out. So I think it's really standardizing the rules, figure out how to get that sustainability.

CHAIR POWELL-PALM: I appreciate that.
I've asked this question to some other farmers, but I'm always interested. What is your crop rotation and how do you feed the soil? And do you try to grow the most profitable crop every year
on all acres?

MR. IRLBECK: Yes. So I am different than most organic farmers. Our crop rotation is three to four years of alfalfa, one year of corn. It's -- so we're growing 50 to 75 percent of our nitrogen through those three years, and taking up a vast majority of our weed control. Now this is not the most profitable rotation if you put it in itself, but with the data and what we're seeing flow in through our system, long-term, it is the most profitable rotation. If you've taken all the external factors of failures and successes, that go on corn, soy bean and those type of rotations, and input costs and labor and equipment and all that type of stuff. We've settled and I've tried every rotation I think under the sun, 34 years of alfalfa growing and nitrogen to take care of our weeds and one year of corn, we might do a little bean here and there, but not much, we're just kind of figuring them out now, so --

CHAIR POWELL-PALM: Okay. Thank you
so much. Kim, please go ahead.

MEMBER HUSEMAN: And I'll be quick. Sorry. Bryce, thank you so much for your comments today. I'm just curious. I know we look at different ways to try to understand the market dynamics from a pricing structure. But does any of your farming practices utilize any of the conventional pricing mechanisms in order to find price discovery for your organic grains?

MR. IRLBECK: You'll -- and specifically greens, no. It's a true markets. I call up and they bid what I'm willing to accept. So it's one of those true markets that doesn't have the outside influences. I think the better thing is the influence do -- to be fair I do have some connections to the conventional market, but the grain prices, I think have more to higher conventional grain prices more people jump out of organic when we see higher organic prices less people around the world want to for lack of better word, fake organic in those other countries because
if they're selling $7 conventional corn, why do
it for $10 and go through the whole process.

MEMBER HUSEMAN: Thank you.

CHAIR POWELL-PALM: Thank you so much,
Bryce. Always appreciate hearing from you and
getting that crop farmer perspective. So thanks
for taking the time today.

MR. IRLBECK: Thank you, everyone.

CHAIR POWELL-PALM: Next up, we have
Justin Raikes, followed by Kris Klokkenga, and then
Lori Stern. So Justin, if you're on, please go
ahead.

MR. RAIKES: Yes. Thank you. I'm a
fifth generation farmer from Easter Nebraska,
we've been in the same spots since about 1900.
We raise grains, organic grains and forages and
are continuing to transition our land base towards
organic. We also raise and sell our own American
Wagyu beef and are trying to grow and continue to
sell our cover crops, specifically in organic
space. And, you know, organic is what allowed me to come back into the operations. So thank you to the Board members. As Bryce said and I know, it's a lot of work, but appreciate what you guys are doing because it is creating real opportunity.

So I wanted to add two comments to his. I agree with everything he said, and just in addition, with respect to integrity, both domestic and imported. You know, one of the things I want to point out is one of the benefits of organic system is the ability to offer, you know, really good paying benefits to our entire team. We strive to do that and create new opportunities to find new ways to increase paid benefits. A big concern of ours going forward is we consider this integrity question is whether we're competing on a level playing field. And with respect to wages, health and safety standards and you know, that's particularly to imports, but it also kind of plays into fraudulent domestic production as well, because obviously somebody is just committing
fraud domestically doesn't have the same incentives that we do. So we're trying to build this, not just for ourselves, but for our entire team and our entire community in the long run and then, you know, it's great that we have the opportunity to do that, and we are very interested in the integrity issue just to, you know, continue to allow that to occur.

The second thing I wanted to point out with respect to this issue is what we've noticed on the part of end-users are particularly merchandisers and market makers. A real reluctance or unwillingness to challenge the validity of whether it's less than robust imports or whether it's suspect domestic. The market incentives just don't seem to be there for the end-users to really look hard at where stuff is coming from. So and I punctuate that with a direct quote, I will not include attribution on the quote, but a notable organic end-user has made the comment that they would rather pay growers in India, you
know, $1 to 2 dollars a bushel for this particular product that's worth quite a bit more here than the deal with farmers domestically in the United States. And so that's the attitude that's out there. And that's why we really encourage the Board to pursue true parity standards and increase enforcement. Thank you.

CHAIR POWELL-PALM: Thank you very much for your comments today. Any questions from the board for Justin? Yes. Logan has one.

MEMBER PETREY: Hi. It's not a question, but, Justin, it's been many years, but it's good to see you, from the old Generation Farms group, but anyways glad you're into organics, that's awesome. Justin definitely helped my operation get into organic so much appreciation there. But anyway, good luck with everything.

MR. RAIKES: Thanks, Logan.

CHAIR POWELL-PALM: Thank you, Logan. Amy, please go ahead.

MEMBER BRUCH: Yes. Justin, thanks
for your time today. Fellow Nebraskan, I really appreciate your participation here and sharing insight on your operation, on our work agenda for that TACS committee is just proposing to have acres on certificates to begin that more transparent-type conversation that growers, inspectors, certifiers, and those end-users can start having. What are your thoughts with that piece? Do you think that will be helpful and do you think it would cause any undue burdens?

MR. RAIKES: Fully support. Hard for me to think of a downside. You know, I'm sure that we could get tripped up on something silly, but in general, I think it's got to be the right direction.

CHAIR POWELL-PALM: Thank you for that question, Amy. Thank you, Justin, for your comments today. One quick question for you, Justin, that I had is, when you're thinking about growing organic, you talked a lot about your -- the viability of your business, being quite good,
you're able to offer a bright spot in your community as far as a viable business. What can the Board do and how do we help farmers like you realize more opportunities? How do we grow this thing that is so valuable? And one sort of other question to that is, when we look at resiliency in American agriculture, do you see organic as a more resilient system? And do you see it as something that is the future of your community?

MR. RAIKES: Big questions. First I agree with Bryce's comments that I think the integrity piece is a big deal, the ability to grow small grains, the ability to mix up rotation, you know, in our neck of the woods is a deal because, you know, we might see more people coming in if there were more options, you know, corn, soy beans in this part of the world's what people know. But, you know, having more flexibility and rotation is a big deal. That's one of the reasons why, you know, we're interest in trying to continue to grow and increase the cover crop seed base because
that's, you know, that's an end-user market. But I think our biggest interest is trying to see, you know, more end-users come in. So we want to see more visible end-users in more geographies as well. We have that's a big wall and the integrity stuff that we talked about, you know, that helps. But I think people see it at the grocery store, they see the end-users that have connection to the products and where it's going. That's all positive in that house. I'm sorry, I forgot your second question.

CHAIR POWELL-PALM: Oh, just when we look at resiliency in real communities, what do you see as the relationship between building a resilient role in America in organics?

MR. RAIKES: 100 percent. You know, I do completely agree. In fact I recently got in an argument with university extension folks close to me because I don't I don't feel like university support is very good for what we're trying to do.
And my points of them is look, I needed, you know, good candidates. I need the pipeline of kids coming out of universities that, that we can train in because we have so many bolt-on opportunities to what we're doing that we can't pursue or it doesn't make sense for us to pursue. There's so many other things that you can plug into the system, from a soil all standpoint for rotation standpoint from wherever else, whether that's running, you know, groups of chickens in parallel for bug control or bolt on grazing opportunities for other businesses. There's a lot of other things we can do. And you know, fundamentally that's creating jobs. It's bringing exactly what we were talking about earlier. You know, we're trying to create good opportunities for people and, you know, fortunately, so far, we've been able to do that.

We want to continue that runway. So we don't -- we can't manage effectively, every single opportunity that might come our way. And it's disappointing to see them have to kind of sail away
because you can't go after them. We don't have enough people or we don't have enough people just to plug into our operation even if they're not working for us in some way that they can bolt on and go. So 100 percent, I'm all the way on that.

CHAIR POWELL-PALM: All right. Opportunities sound bound list. So appreciate that. We need to add some fuel to this fire. Thank you for your time today and your comments. New up we've got Kris Klokkenga, and apologies if I'm saying that wrong. So Chris, please go ahead.

MS. ARSENAULT: Don't think Kris is with us. I haven't --

CHAIR POWELL-PALM: All right moving on then to Lori Stern. Lori, please go ahead.

MS. STERN: All right. I'm here somewhere.

CHAIR POWELL-PALM: All right. Thank you.
MS. STERN: So thank you for the opportunity to speak. I'm Lori Stern, Executive Director at the Midwest Organic & Sustainable Education Service, also known as MOSES. Like other speakers, I would like to send my appreciation for all of the members of the NOSB especially the farmer members and in particular new member Liz Graznak, who was our 2020 farmer of the year. So again, congratulations to Liz.

I want to use my time today to speak generally about the organic program and farmer access to a certification program with integrity. From previous comments, I know we are all committed to increasing organic products. However, the goals of organic or more than success in the marketplace. Organic is a system that relies on diversity to build healthy soils and vibrant communities. There are farmers who face barriers to certification, but live the values and intent of true organic. For these farmers and other small, medium-size farmers already certified it is
important to reduce the cost of certification. Ideally for smaller operations, we proposed that these costs would be covered 100 percent. We are grateful that the cashier program mistake was corrected. However it is still inadequate for operations that gross less than $250,000 a year. Moving to this approach would minimize paperwork, additional applications, and make the support automatic and accessible. Another way to improve access to certification is to promote group certification as an option. Several incubated farms in the Midwest have utilized this approach, the ability for a collective of farmers who share a label, farmland, or unique farming methods, to also share the burden of documentation, makes the certification process less daunting and threatening. We see younger farmers and black, indigenous, and other farmers of color embracing cooperatives and collectives as a way to gain land access and farm life balance. Good certification would validate this approach and increased
participation in the National Organic Program for
a new group of farmers. It feels very much like
the organic movement is at crossroads. We urge
the NOSB to keep small to medium scale organic
farmers in mind as requests come for changes that
favor those that view the label on the in terms
of market share. Instead, let's work to make the
label more accessible to the farmers whose
operations more closely resemble what consumers
expect from organic: diverse, whole-system farming
that builds healthy soils and truly benefits
people, animals, and the climate.

CHAIR POWELL-PALM: Thank you so much
for your comments.

MS. STERN: Okay.

CHAIR POWELL-PALM: Do you have any
questions from the Board? I'll throw the same one
at you since you almost answered it for me. Could
you kind of dive in a little bit more? I feel like
we've heard a lot about, you know, organic not being
necessarily considered an obvious climate solution
and not acknowledged when large funding opportunities come around as the climate smart solution. And so when we're looking at that we're only one percent of the land, what do you see as the balance between elevating certain organic farmers versus saying really anyone who's willing to participate is so ahead of conventional farming, that we should just be trying to add as much fuel to this as we can to keep this growing. What's the balance to strike there?

MS. STERN: It's a tough one for sure. I think that ultimately we want to get to the place where what we're not advocating for us to something that's less bad.

CHAIR POWELL-PALM: Yes. Yes.

MS. STERN: And I think that, at the end of the day, small farms still feed the majority of the world. And, as we're and other speakers have pointed out the fragility in our food system. I think we do need to continue to do what we can through USDA programs and the ways that we
approached us to really strengthen the ability of people to access land and continue to kind of farm at human scale. And yes, I mean, there's definitely a balance to be had. And at the same time, I think, just this notion of, you know, building healthy soils and being truly regenerative in the way that we are farming, is where -- I mean, you mentioned climate at the front end. And I think that's -- it's still going to be the critical piece. It still where we want the balance of this to happen, I believe.

CHAIR POWELL-PALM: Thank you. Liz has a question for you.

MEMBER GRAZNAK: Hi, Lori.

MS. STERN: Hi, Liz.

MEMBER GRAZNAK: Being a small farmer myself I'm very, very glad that you brought up this topic and it was actually a conversation that was happening in the chat earlier today and also a topic of conversation earlier. So I think it is a real concern how to keep and get more younger, newer,
smaller-scale farmers. I don't want to say to I mean, they -- we are farming organically, but having faith in the label and having faith in what USDA NOP stands for is really, really important.

And I recognize that it is an issue, but I don't know what the answer is. I don't know how to approach the young farmers and the small-scale farmers that are in my community to impress upon them why they should certify and I think it is a topic that people are talking about. But I just want to know maybe from MOSES' perspective what ideas you guys have or you're talking about of ways to address the problem, I guess. It's a super hard question.

MS. STERN: It is a really hard question. And I think I touched on it a little bit. I mean, if we look at -- I mean, group certification is something that happens, but it's not necessarily ubiquitous. It's not all certifies that know how to do that --

MEMBER GRAZNAK: Yes.
MS. STERN: -- or note that. So I think that ultimately I guess we're starting with this place of reducing the barriers. And true to all USDA programs, but specifically in this instance, it would be access to the National Organic Program for sure. So reducing barriers and then doing what we can to really promote markets. I mean, a lot of these comments are saying the same thing, right? So people know that there's a place to sell into that they're, you know, really looking at equity along entire food systems and value chains. So that that happens. I mean, the concern I guess with some of the largeness is that where the profit ends up. But I think if we can show value across supply chains, more local food systems, reducing barriers to many of these programs that make it impossible and then land access things just tough, just generally. You know, people that want to farm organically and we could probably happily convince them to get certified, may not have access to land. So just
trying to be really creative and how that happens too.

CHAIR POWELL-PALM: Liz, thank you for that question. That was great. And thank you for your answer, Lori. Really appreciate your time today and your comments.

MS. STERN: Yes. Thanks again for the opportunity.

CHAIR POWELL-PALM: All right. Next up, we have Mark Schonbeck, followed by Beatrice Maingi, and then Doug Crabtree.

MS. ARSENAULT: Nate, I've not seen Mark on the line with us.

CHAIR POWELL-PALM: All right. Scooting right along then we'll have Beatrice Maingi, Doug Crabtree, and then Nate Lewis. So Beatrice, please go ahead.

MS. MAINGI: Can you hear me?

CHAIR POWELL-PALM: We can.
MS. MAINGI: Okay. Thank you, Mr. Chairman, on behalf of Safe Foods Corporation, I'd like to thank the Board for reviewing the petition to add CPC to the national list and for the opportunity to provide comments. CPC's an FDA and USDA approved intervention that has been effectively used for over 15 years in conventional poultry processing plants to reduce the prevalence of pathogens. CPC is classified as a quaternary ammonium compound or QAC. Most QACs are approved by the EPA for use as sanitizers and algicides. However, for over 60 years, CPC is the only QAC approved by the FDA for use in oral applications, such as toothpaste, lozenges, and mouth washes. CPC cannot be compared to the EPA-approved herbicides paraquat or diquat. These materials are categorized as biologens which function as highly reactive redox compounds, which CPC is not. Therefore, it is chemically inaccurate and misleading to equate CPC's function and toxicity to that of paraquat and diquat. Although the
subcommittee's proposal states that CPC is not essential for organic poultry processing due to a robust organic poultry industry supported by existing materials, data from the USDA's Food Safety and Inspection Services or FSIS shows that existing materials used in organic processing are inadequate in addressing food-borne illnesses. FSIS announced in 2021, a shift from measuring poultry pathogens based on total salmonella serotypes, to focusing on three serotypes that are responsible for causing most human illnesses. FSI has identified key performance indicator or KPI reduction levels for those three strains. From that data from June 2020 to July 2021, FSI's data shows that 42.5 percent prevalence of the KPI strains from all the establishments and then 100 percent prevalence came from organic on the establishments, while 23.5 percent prevalence was from establishments using CPC. Therefore indicating that CPC would be a much needed tool for organic-only establishments to control the
prevalence of these three key KPI strings. The subcommittee commented that the rules are unclear on how to handle an inert compound in a product. In the case of CPC formulation, the inert component is propylene glycol. So it would be safe to suggest that the Board has encountered a similar situation in the past with parasitic acid. PAA formulations contain up to 50 percent acidic acid which has no performance function. Again, Safe Foods would like to thank the Board for reviewing the petition and allowing for comments. Thank you.

CHAIR POWELL-PALM: Thank you very much for your time today and your comments. Any questions from the Board for Beatrice? Mindee has a question. Please go ahead, Mindee.

MEMBER JEFFERY: Yes. Thanks. Since we have a little bit of time, do you mind if you want to finish your statement on the comparison to parasitic acid, did you get complete with that?

MS. MAINGI: Yes. So according to the
way parasitic acid is in its equilibrium, it has the reactants as acidic acid and hydrogen peroxide. But when you have your finished product, which is PAA, you also have acidic acid present in that product. So it's always present, but it doesn't actually serve a function. So you could say it's an inert product that is already included in PAA.

And for that, there doesn't seem to be any -- I guess, any issue with having it listed as a -- on the national list. For PAA to be listed even though acidic acid is an inert part of it that is not on the national list, if that makes sense.

MEMBER JEFFERY: Is it the same requirement because CPC requires the propylene glycol, so you're saying it says it's the same and now the same?

MS. MAINGI: It is because the raw materials in order to produce PAA are the acidic acid and hydrogen peroxide. However, when they're reacted acidic acid does not fully react or it doesn't get out of the equation because it's an
equilibrium. So it's always going to be present along with the product, PAA. But in this case, it's just I mean, all right, it doesn't actually perform any function. It doesn't kill bacteria, it's just -- it's presence.

CHAIR POWELL-PALM: Any other questions for Beatrice. Sanitizers, it's something I always have on the top of my mind so I really appreciate hearing from experts like you and we appreciate your time today.

MS. MAINGI: Thank you for the opportunity.

CHAIR POWELL-PALM: All right. Next up we have Doug Crabtree, followed by Nate Lewis, and then Ken Dallmier. Doug, are you -- I'm not sure if you're joining my phone, but if you can hear us, please go ahead.

MR. CRABTREE: Can you hear me?

CHAIR POWELL-PALM: Loud and clear. Thank you.

MR. CRABTREE: That's great. I want
to apologize for any background noise. I'm in a tractor and we farm up here in North Central Montana and we're seeding today or trying to. I want to first thank the Board for the opportunity to testify and really honor your commitments being there. I'd like to 2nd, or 3rd, or 15th of the comments that other farmers have made about scheduling these meetings at times when it would be much more appropriate and convenient for producers to be involved. But the issue I really want to address primarily is the nitrogen fertilizers. You know, we grow 15 to 20 crops across 13,000 acres here and have been engaged in organic agriculture for 20-plus years and worked to get certifier and inspector. I've got a lot of experience and I just -- I find these products to be absolutely unnecessary and see many risks in their inclusion. In our systems and those that I'm familiar with across the vast part of country, we rely on crop rotation. On what I called green manure crops, essentially what I'm seeding today
coincidentally. We grow in our rotation a five-year rotation, two of those are green manure crops in our seven-year rotation. We'll have two years devoted to that. Crops that are grown strictly to build and feed the soil. And to my understanding of the standards that is a requirement. That's been moved everyone is they purchased material or we'd have to go off farm to get to the supplement our fertility. That's the view from here.

CHAIR POWELL-PALM: Thank you so much, Doug. Oh, sorry. Go ahead. I didn't mean to cut you off.

MR. CRABTREE: No, I've said my piece and would gladly address any questions.

CHAIR POWELL-PALM: Thank you. Any questions from the Board? I have a question, Doug. When you think about growing your system, you said 13,000 acres. It sounds like that's expansive. There a lot going on there and there's a lot of different crops being grown according to your
testimony, could you speak just a little bit more about how you view the relationship between the farmer and the land as far as feeding the land and the land feeding the farmer, and how there's, maybe a missed piece. I think in some of these discussions, but we're really looking at a holistic system that can be self-sustaining. Could you speak a little bit more about the give and take with crop rotation and viable farming.

MR. CRABTREE: Well, I'll try to address that, Nate, that's a big question. I guess, first of all I want to offer, you know, in Montana we're a very small farm. The normal or non-organic operations around us are two or three times the scale that we are operated on. So I would want mention that.

CHAIR POWELL-PALM: Thank you for that reminder. Yes.

MR. CRABTREE: Not to be deceived by a number that seems large in other parts of the country. But to address your question, you know,
we call our farm Vilicus and that's the Latin word means steward of the land. We take that very seriously. We believe that -- you know, it's not only our ethics, but that -- that organic farming is built upon. What we're really here for is to be stewards, to build soil, to feed the biology, and then as a byproduct of that, we will produce some products that are able to be food for others.

But if we don't take care of the soil, we're not organic at any definition and we're not going to be here very long, that's critical. And the key to that is look to nature as our guide, diversity in any way you can get it. More crops, more types, more seasons, integrate livestock, more species.

Under climate change that's just becoming more and more evident and more and more necessary. Spread your risk, diversify economically, agronomically. That's what the key is.

CHAIR POWELL-PALM: Thank you so much for that answer. Kim has a question for you.

MEMBER HUSEMAN: Hi, Doug. I really
appreciate your time especially being out on the tractor today. Being a larger-scope producer. Can you speak to your challenges with sourcing seed for your crop rotation and give us a little bit more kind of, just dialogue from your perspective in that arena?

MR. CRABTREE: Sure. Well, if you would have asked me six months ago, I'd said we've never had any trouble finding seed. We do have some trouble farming commercially as organic. But I think that's growing. We're trying to grow more and more of our own, which is the best way. The biggest supply chain challenge we've faced is that there were actually some seeds we could not buy this year. Oats, and soft wheat, that we have a market for. So it has become a challenge. I hope and I think that's transitory. But, you know, as I said earlier, I think the best thing we can do is grow our own or work with other producers in our region and cooperatively to grow seed organically on our own farms and then it can be
another market for us as well.

MEMBER HUSEMAN: Absolutely. Thank you very much. I appreciate your response.

MR. CRABTREE: Thank you.

CHAIR POWELL-PALM: Thank you, Doug for joining from the tractor, and I -- we all hear you loud and clear that these meetings could be better timed for a lot of farmers. But I just want to give a huge shout up to those farmers who still make it despite the challenges. So thank you for your time today.

MR. CRABTREE: Well, thank you all and let's see you in January next time.

CHAIR POWELL-PALM: All right, sounds good. Next up we have Nate Lewis, followed by Ken Dallmier, Emily Brown Rosen, and then we have Maddie Kempner and Margaret Scoles to finish this out today. After that, I'm going to go through the list of folks who we missed, who weren't available when we were first calling to see if anyone is on the line as we do have a little bit
of time. So Nate Lewis, please go ahead.

MR. NATE LEWIS: Hey, folks. Nate Lewis, calling from Olympia, Washington, speaking on behalf of our farm, Oyster Bay Farm. My wife and I farmed together for about 20 years, we raised organic pastured broilers and eggs, grass-fed beef, lamb, pastured pork, vegetables and crops.

We dabble in some shellfish raising oysters and clams on the tidelands that we own on our farm and we manage a small FSC certified timber lot for specialty wood products sold locally. My off-farm job is with Washington Farmland Trust. We work to preserve organic and sustainable farms in State of Washington. Before that, I was a farm policy director at the Organic Trade Association and before that, I was a certifier with the Washington State Department of Ag and I ran the materials review program. So my past experience informs my opinions and comments I want to provide. But being
clear that their comments are purely my own. On behalf, I suppose of Oyster Bay Farm, but probably more Nate Lewis, the policy wonk and advocate for organics. I want to talk about the crops subcommittee's recommendation on soil fertilizers, I really support the move of the recommendation from the practice standard 205-203 to the prohibited substances standard, so that there are actual teeth on the potential use of these substances. So I think the positioning of this topic at 105 is appropriate. But there are two areas that I think are lacking in the proposal. One is that it doesn't address soluble fertilizers of non-nitrogen form like phosphorus and potassium and other macro and micro nutrients, and then secondly, it doesn't provide a mechanism for the industry to petition or put forth substance-specific restrictions that are more appropriate for the types of products to manufacturing. So if I were in your shoes, I would pull this recommendation back one more time or a
few more times to get it right. This is a really
significant issue. We're talking about
non-synthetics, that are highly soluble and
clearly don't immediately align with organic
principles but that need, we do need guidance and
we do need mechanisms. So I would recommend
pulling it back, doing some more work and then the
products from that further work would be a
definition for the term and currently undefined
term mined substances of high solubility. And
then a recommendation that term be added to the
205-105 with the allowance that manufacturers'
petition to add restrictions to 602 to allow those
things. So I know at the end of the day and the
second thing, so that's a mental gymnastics, I'm
happy to expand upon that, but I think that would
achieve a lot of the goals and really give play
-- you know, give a good baseline for the good work
that you've already done. So thanks.

CHAIR POWELL-PALM: Thank you so much
for your comments. Amy has a question for you.
MEMBER BRUCH: Yes. Nate, thanks for your time today. I really appreciate that. Wanted to ask you, you had mentioned to define mine substances of high solubility, and I was just going to ask you what your definition would be of that term --

MR. NATE LEWIS: Yes.

MEMBER BRUCH: -- you forgot that part.

MR. NATE LEWIS: Yes. A little bit.

I think there's two pieces that we need to look at. One is obviously the mined side, mined piece. And I would want to be expansive on that. So it wasn't just things you've dug out of a pit in the ground. I view like we have -- like ammonia extracts are mined from chicken manure piles. So I think we need to be expansive on what mined means. It doesn't necessarily have to only be things that are dug out of a hole in the ground. And then high solubility I think needs to be -- we need to be working closely with our colleagues at APFCO and the fertilizer definitions that they develop there.
so that we're not putting liquid manure and, you
know, manure lagoons into that category. We need
to be clear that solubility has to do with plant
availability, it has to do with the behavior of
the substances in the soil so that they're
bypassing natural processes, and something along
those lines. But I think we can really, as a
community, focus on the mined piece and sort of
what we're comfortable with. But then when we get
high solubility, I think we really want to align
with established terms that are already out there
in APFCO definitions, that are used by state
departments of agriculture to regulate fertilizer
labeling and truthfully win there.

MEMBER BRUCH: Thank you.

CHAIR POWELL-PALM: Thank you very
much for your comments today, Nate. Since we just
have a tad bit of time, I just want to hear, Nate.

You're both a farmer, but also someone who's works
with a lot of farmers. What's that ticket to
seeing organic grow, to where I can go into any
gas station in Montana, rural America where we don't have co-ops or nicer grocery stores, and people pluck fresh organic fruits and vegetables from the shelves?

MR. NATE LEWIS: Gosh, Nate. I think it's going to be do mean that's sort of do a cop out here, but it's going to really be site-specific, depending on the crops you're growing. Depending on, you know, what your goals are. But I think the recipe is going to be education of farmers, I think that's been brought up a lot about, you know, getting farmers comfortable with organic being option. I think distribution channels are obviously one of the major challenges and bottlenecks, and, you know, and then sort of reassigning how our government subsidizes food production. You know, there's a reason why Cheetos are cheap and organic apples are and part of it is it's more expensive to grow out organic apples, but also it's an alignment of priorities and resources.
CHAIR POWELL-PALM: I appreciate it, yes. I think we've been hearing. All right. Thank you for your comments today. Next up, we have Ken Dallmier, followed by Emily Brown Rosen, and then Maddie Kempner. Ken, please go ahead.

MR. DALLMIER: Well, thank you. Following Doug and Nate, that's quite a -- quite shoes to fill. And one thing for Doug, we are exceedingly jealous in Illinois, that he's seeding out in Montana. And we actually have a little bit of rain going on today in Illinois. So good afternoon and thank you for the opportunity to present our insights to NOSB. I'm Ken Dallmier and the president of Clarkson Grain Company in Cerro Gordo, Illinois. Clarkson Grain provides organic and non-GM corn and soy beans to global and domestic food markets. We also provide organic and non-GM soy lecithin which is used as a food ingredient in consumer products from chocolates to infant formula. The $60 billion value of the organic market is unique and driven
by the faith and trust in USDA or organic seal and
the integrity of those who follow the production
practices ascribed to that seal. We would submit
three ideas to the NOSB to reduce the incident and
incentives to fraudulent activities within that
seal.

First, to improve domestic market
demand, by tightly regulating the import of organic
grain into the United States. Expand the
harmonized tariff schedule codes to cover organic
soy meal for feed and organic soy beans for oil
stuck. Organic soy lecithin and organic sweeping
grain for meal for feed. These new HTS codes will
allow mass balance comparisons to highlight
regions of imbalance and thus potential fraud.

Secondly, direct the USDA to utilize
its recall authority for products not in compliance
with the USDA organic seal on the label. A
punitive fine, should be leveled on companies
selling products found to be out of compliance with
the organic seal.
Thirdly, we would require organic certificates to declare crop by acreage to establish a mechanism for mass balance. The grower would then have to balance production and sales equation with their certifier who would update the NOP integrity database. These action items enforce already existing regulations and norms of the U.S. organic market. They provide mechanisms and incentives to consistently apply their organic regulations across the globe, provided for action when fraud is suspected, and provide significant disincentives to running the risks inherent in a process system. USDA organic seal has grown from an idea into a $60 billion marketplace. To continue that growth trajectory, a solid regulatory structure needs to be consistently applied across both supply and demand. By continuing to allow interpretation and implementation at a local level of those regulations, we risk losing that customer trust.

Thank you very much for your time and your
attention. And if there is extra time, I'm happy
to field any questions.

CHAIR POWELL-PALM: Thank you very
much for your comments today. Any questions from
the Board? Amy, please go ahead.

MEMBER BRUCH: Yes. Thank you, Nate.

Thank you, Ken, for your time today. I really
appreciate it, and if you can send the rain our
way. We'd love that -- anyway I want to --

MR. DALLMIER: Any time.

MEMBER BRUCH: I want to appreciate and
recognizes your ideas just to deter fraud, I think
the three that you brought up were pretty
interesting. The numbers 3 is one that we
currently are discussing amongst our subcommittee.

MR. DALLMIER: Yes.

MEMBER BRUCH: About just recognizing
acres by crop on certificates and getting -- and
we're getting today and Tuesday some great feedback
from stakeholders. You had mentioned kind of that
farmers and certifiers, inspectors can kind of work
together to see that mass balancing. Do you as a purchaser of organic soy beans and corn feel that you could also get into that equation and do a quick mass balance if you see what a farmer is selling to you as to production if that's evident on the certificate?

MR. DALLMIER: Yes, of course. That would be on several layers, actually. On the first layer, organic integrity I think that that's self-evident. But as a buyer to make sure that in lean years that that balance is correct. In other words, we're not bringing in non-organic grain into an organic contract. And on strong years that we're looking at right now where in some cases, very early organic contracts are -- were consummated below the current non-organic price. All of a sudden you have crop failure. Not saying that it's right or wrong, but it'd be a good way to check that. So I think there are many, not only on the organic integrity side, but I think on the business side, that would also be a very good
business tool, on both the supply and the demand side.

CHAIR POWELL-PALM: Thank you for that question, Amy. If there aren't any other questions, I have one for you, Ken.

MR. DALLMIER: Yes, sir.

CHAIR POWELL-PALM: It sounds -- we've had several commenters note that oftentimes farmers don't have just one buyer. In the world of grain commodities, it seems like there's actually, oftentimes, growers selling one maybe to two different buyers, and lots of times buyers buy significant portions of a farm's production.

And so when you have growers come in, being able to spot check -- say they have ten trucks lined up at your elevator, being able to spot check does that math work out, do you think that would be a useful red flag to be able to go to possibly that grower certified and say it seems like there's a lot of grain coming in here compared to the acres, and just be able to crowd source concern?
MR. DALLMIER: Short answer is yes. The longer answer is you'd have to be a bit careful about how you do that.

CHAIR POWELL-PALM: Yes.

MR. DALLMIER: But we know that, as Nate brought up I believe, domestic, you know, we're not -- our domestic house isn't lily-white either. So we need to make sure that in a process-based system that there are checks and balances. And that system needs to work cooperatively to ensure that the integrity of the label on -- from the domestic side as well as from the international import side is true. And really that's, to me, the single biggest risk of the value of the USDA organic label, is that -- is loss of that trust whether it be domestically or internationally.

CHAIR POWELL-PALM: Absolutely.

Thank you so much.

MR. DALLMIER: Thank you for your question.
CHAIR POWELL-PALM: I appreciate your time today and your insights. Any other questions for Ken from the Board? All right. Thank you, Ken.

MR. DALLMIER: Thank you very much.

CHAIR POWELL-PALM: Next up, we have Emily Brown Rosen, followed by Maddie Kempner, and then Margaret Scoles. Emily, please go ahead.

MS. BROWN ROSEN: Hello, I'm Emily Brown Rosen, Organic Research Associates, and I'm glad to be speaking with you—all this afternoon. I'd also like to welcome all the new members to the board. It's great to see so many new faces and very well-qualified people. For those who do not know me, I work in organic certification, organic technical support, materials review for OMRI and then I ended up working at USDA NOP in the standards division for quite a few years. One of the issues I worked on there was the whole issue of inert ingredients and pesticides. And I helped
facilitate the inerts working group which met over
quite a few years starting in 2010 and we ended
up with the group that included EPA, USDA, and NOSB
members and ended up with a recommendation that
went to the board that ended up being modified a
bit and turned out to be the NOSB recommendation
of 2015 to change the annotation on inerts as it
is now. So that was a long process. I mean, it's
been even longer processes since the year 2000
trying figure out how to review inerts and organic.
And we still -- we're not really there yet. So
I know you I -- really understand your problems
and frustrations of trying to deal with this issue
on distilled tall oil, which is -- which I commented
on. I wanted to comment tot -- I need to make a
correction in my written comments. I misquoted
the EPA references there because I mistakenly
looked at the 2010 technical review rather than
2021 one. So basically it's not a very significant
difference but I just want to point out in response
to the discussion document question number 3 about
how EPA classifies distilled tall oil. It is considered exempt from tolerance, as an inert ingredient and it's listed that 40 CFR 18910, 18920, 18930 for pre and post service crop use as well as livestock use. The kind of -- you know, I had sort of said that it was -- in my previous comment, I said it was a lot of the active pesticide ingredient which is not true. It's listed there as an inert ingredient. However, all those typos and PPA, if they have a register, have a opening paragraph that acknowledges that these things are exempt from the requirement of a tolerance when used as an occasionally active ingredient. So it seemed a little bit ambiguous how EPA is considering them. The '21 technical review does mention some scientific research on the actual pesticide use as an active ingredient. However, the petition does describe it's used solely as an inert ingredient, used as a disinfectant, as a sticker, as a solvent, and that's really the purpose that you-all should be reviewing it for.
But overall, the bigger problem here is the whole how to review inert ingredients at all, given that we've not moved forward with the changing annotation. I can add a little more, if you want.

Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments today. Your name has come up several times as being an invaluable resource, so we really appreciate your participation. Brian, please go ahead.

MEMBER CALDWELL: Emily, thanks for your comments. I've been struggling with this whole differentiation between active ingredient and inert ingredient for the distilled tall oil and probably for everything else too. But in this case, it really looks from the research articles cited that show that distilled tall oil does have insecticidal efficacy. So does it make a difference if it's called an active ingredient or called an inert? That's the first sort of question there. And the second one is that the rates that
are in the petition are relatively low rates and probably below what we would normally think of as active ingredient rates. And yet, the inert ingredients can be used in products for 99 percent of some products are inert. This is really confusing to me but if the petition says it's only used at a certain rate like 20 percent of product or something like that, but would the manufacturers of these pesticides be held to that or can they just say, well, it's just an inert ingredient, we can kind of use as much as we want? I don't know if you see what I'm asking here.

MS. BROWN ROSEN: Yes, I understand that. I think it's difficult, yes. I don't know if it really matters a lot that it's called inert or active because it does seem like there's -- they have both properties. However EPA has allowed it to be called inactive or inert, and so that means it's not on the label which makes it a lot harder for farmers or anybody to know that it's there.
But the fact that it's, you know, the way we have -- since EPA recognized it as inert, and it functions on that registered pesticide as inert. I mean they will look at the pesticides as you know case by case for each one. If they felt there was really an active ingredient it didn't qualify for inert then it wouldn't be on the label as inactive. So you -- I think by -- if you agree to put it on the list as an inert, that protects it from being used beyond that capacity in organic.

It would also have to be possibly separately listed as an active if you -- if somebody wanted to formulate it with -- and EPA decided it was an active ingredient, You know, I think that Kevin already knows, it's EPA's call on this, you know? USDA doesn't really have a whole lot to say about how pesticides are labeled. So, you know, you really kind of need to work within the framework of EPA, but not step on their toes or else it's just not going to fly through the, you know, regulatory process. So I -- you know, in some ways
it doesn't matter, but I think it kind of protects organic to call it inert but then have clear rules for what inerts are allowed. That's where the problem is now. It's like we've got, like OMRI pointed out in their comments, there is a lot of things on the old obsolete list for that are currently allowed in organic products that are very closely related to tall fatty acids and some looked like they might be worse somewhat might be better, but none of them have been reviewed by the NOSB.

So if we go forward with case-by-case review and then we also held all this force from sitting out there, it's going to be a very inconsistent list.

And you might see decisions that are made that are some are fair, some are maybe not so fair, based on, you know, of what time period they got allowed, and they're all being allowed. So that's why I'm just really hoping you can work within a periodic time to try get further action on this, and PR and change the rules so that everybody's, you know, following the same plan or the same rules to get
approved and considered.

MEMBER CALDWELL: Well, thanks, Emily.

We may rely more on your expertise as we tried to weave through this, to me pretty densely incomprehensible process of understanding the inerts and how they're regulated. So really, really appreciate that. Thank you.

MS. BROWN ROSEN: Sir, you are welcomed.

CHAIR POWELL-PALM: I apologize. I knew I was going to mess up once, so thank you for your time and expertise today, Emily, really appreciate it.

MS. BROWN ROSEN: Thank you.

CHAIR POWELL-PALM: All right. Next up, we have Maddie Kempner and then Margaret Scoles and then we'll run through the list, see if folks who we missed may want to comment. Maddie, please go ahead.

MS. KEMPNER: Hi, Nate, and thanks
everybody for your time today. My name is Maddie Kempner and I'm the policy director at the Northeast Organic Farming Association of Vermont. Our accredited certification program for Vermont Organic Farmers certifies nearly 800 farmers and handlers in Vermont. I really, really appreciate the work of the NOSB members and your dedication to organic integrity, especially on behalf of organic producers here in Vermont. And I first want to make a comment about hydroponics in organic. In Vermont, organic farmers are part of an informal group of certification, education, and policy organizations who agree that soil is the foundation of organic agriculture, and who strive to achieve consistency in our organizational policies and certification decisions. Specifically, we agree on the following: soil is the foundation of organic agriculture. And a full reading of OEFFA in the organic regulations requires that organic plants be grown in soil. Airponic, hydroponic, and crops grown to maturity
in containers do not comply with OEFFA 6513-V1. We can't achieve consistency in our policies and decisions until the NOP goes through the formal making process for greenhouse production standards which were recommended by NOSB nearly 20 years ago. And we cannot achieve consistency in our policies and decisions until containers go through the process of NOSB discussion or recommendation and NOP rulemaking. The members in this group agree that the following crops grown in containers have historically been certified organic and should be allowed to be certified moving forward including sprouts, microgreens, spotter, transplants, and mushrooms. And we acknowledge they still -- these items still require NOSB discussion, recommendation, and rulemaking to improve the consistency of existing certification of these products. The 2010 NOSB recommendation on terrestrial plants in containers and enclosures should be used as a starting point. To address these inconsistencies, we
urge NOSB to activate the latent agenda item field and container -- excuse me, field and greenhouse container production. And we would happily provide detailed input as to the forward movement of this agenda item with the shared goal of improved transparency and consistency and bringing us integrator alignment with the global organic movement, including the recent IFOAM position on hydroponics.

Secondly, I want to comment on the NOSB's proposal to limit use of nitrogen fertilizers with the C to N ratio of three to one or less to a maximum of 20 percent of a crop's needs. NOFA Vermont and DOF support this proposal and even our producers would sometimes rely on these products during especially cold and wet conditions, support limiting their used to 20 percent of crop needs. And as a member of the policy committee of the Organic Farmers Association, I also want to provide some
clarification on a comment you received from OFA earlier in this week's meeting. I want to share with the Board that while it has not yet been officially adopted by our farmer membership as an approved OFA policy, the policy committee has voted unanimously to support the NOSB's proposals to limit use of nitrogen fertilizers. And I will close by saying that personally, I really see both of these issues as critical to organic truly living up to what I think most people in our community aspire for it to be, which is not only climate smart agriculture as it might be defined by USDA, but a type of agriculture that represents a meaningful solutions for ecological and biological crisis. Organic farming should promote biodiversity below-ground, above ground, and at a landscape scale. And without healthy living soil as a foundation, the principles that led to the creation -- and I continued to guide so many of our producers and what they do every day will be rendered meaningless. Thanks.
CHAIR POWELL-PALM: Thank you very much for your comments. Do we have any questions from the Board? Since we have a minute before our last couple of commenters, I have a question for you. Could you just repeat that last two sentences of your comments.

MS. KEMPNER: Do you want me to just reread it to you or do you want me to like say from my heart again?

CHAIR POWELL-PALM: Either way. The rendered meaningless part, I didn't quite catch the whole thing.

MS. KEMPNER: Essentially my thought behind them and why the issue of hydroponics and highly soluble nitrogen fertilizers are important to me and I think our community in our produces in Vermont as a whole is these issues are really tied to organic being based in the soil as a foundational issue and that soil being sort of a living, breathing biological organism that is the basis of all life. And without which, farming just
happens as a system of inputs in and crops out.

That's not tied to our greater ecology as I think organic was intended to be. So I think, you know, by allowing the use of highly soluble fertilizers to a significant degree, and by allowing hydroponics, we're really removing farming from that broader ecological context, which I think is so important to organic really being a meaningful climate solution.

CHAIR POWELL-PALM: Thank you for that. Then my question for you would be: If we look at the total percentage of food coming from hydroponics versus all of the farmers producing soil-based foods like grains, dairy, forages, what is the balance we can strike for saying what we aspire the organic industry to be and how we still honor that -- not to toot my own horn, I was out seeding 16 hours a day. And the only reason I can be a farmer is because of organic or folks who have commented that they were able to come back to the farm because of organic. With these broad
sweeping statements that something like HSN or hydroponics rendered everyone else's work meaningless. Would you expand on that a little bit and maybe clarify?

MS. KEMPNER: Yes. And I don't mean to say that it rendered everyone else's work meaningless. I think I just mean that it really goes against what I see is the foundational principles that led to the creation of OEFFA. I don't mean that the work that other folks are doing is meaningless, or that the work that producers who are still producing in the soil is meaningless, that's not what I mean to say at all. I just mean that if we ignore living soil as the foundation, it just really goes against those founding principles. And in some ways renders those principles potentially meaningless if we go down this road of moving toward a system of agriculture that's really dependent on outside inputs in that way, if that makes sense.

CHAIR POWELL-PALM: It does, it does,
yes. Thank you for that clarification. All right. Well, thank you so much for your comments today. I appreciate it. Next up, we have Margaret Scoles and then our last commenter today is going to be Kris Klokkenga. So Margaret, please go ahead.

MS. SCOLES: Thanks. Margaret Scoles, International Organic Inspectors Association. Members of the NOSB, NOP, friends, and colleagues, my comments today are different from our written comments submitted. IOIA is a leading worldwide training and networking association for organic inspectors. I'm here to express gratitude. More than a year ago Dr. Tucker published a human capital memo, you the, NOSB opened it up for public comment by making it a discussion document in 2020 leading to the recommendation which provided the foundation for the NOP to release a request for applications and funding to address human capital concerns. All of this work paved the way for a very important
initiative. At the spring NOSB meeting 2021, IOIA announced our new apprenticeship intensive program to help onboard inspectors faster and more effectively.

Apprenticeship, the lack of was consistently identified as one of the biggest barriers to a professional career path, partnering with Organic Valley, IOIA will deliver livestock apprenticeship, intensive training this year. Everyone agreed that human capital was a critical issue. This lack of diversity among organic professionals with another concern. NOP released funding a little more than six months ago only. IOIA is privileged to be a partner in four of the projects funded. The impact on our community has been astounding. Here are some of the things that have happened. IOIA was funded to develop an inspector apprenticeship tool kit that other organizations could use to help recruit and train new inspectors. I spent last week in Kentucky as
co-trainer for a very diverse cohort of crop
inspection training participants, we removed the
barrier of cost. They did not pay to participate.
As for several additional questions to avoid
screening out diverse participants and targeted
new and diverse audiences. We work with regional
organizations to reach new audiences. And with
the University of Kentucky and Kentucky State
University to develop robust curriculum. Most
participants were under 35, many were smaller scale
farmers. Three of 17 were African-American. All
were happy to help ground truth the training
concepts. Crop apprenticeship intensive is
coming up in Kentucky in just a few weeks with many
BIPOC applicants. Through a project led by
Organic Farmers Association, many DEI training
opportunities have been offered. The five
partners, including IOIA, each had the opportunity
to take on a BIPOC intern. IOIA's young
African-American intern is training to become an
organic inspector, or reviewer, or both. Oregon
Health used a project where universities are identifying gaps in existing organic curricula and creating resources to fill some of those gaps, and more internships through OSU. The Organic Integrity Cooperative Guild is developing a new inspectors cooperative model, so much of a different landscape than one year ago. It's fantastic to see our sector working together.

Thank you.

CHAIR POWELL-PALM: Thank you so much for your comments. Any questions for Margaret? I'm going to chastise myself preemptively from making a comment since it's not as much a question, but I just wanted to say that oftentimes we focus a lot on what's going wrong in our industry and I think there's a lot that's going right. But I think this is an especially exciting moment to have identified such a noticeable issue barrier, impending crisis, as we look to keep the human capital resources we have in the industry, and the work that IOIA has done through the NOP I think...
has made a real impact already. And I think seeing the folks who have commented today and on Tuesday, we can see that there's a breakthrough with who is able to participate in the organic industry. And I think that's going to make us more relevant but also more resilient in the future. So thank you for your work.

MS. SCOLES: Thank you. And I hope you saw the chat from an NOSB member who had that intern as a graduate student.

CHAIR POWELL-PALM: Yes. Dilip has a question for you real quick.

MEMBER NANDWANI: No. Sorry. It's not a question, actually. I, kind of, privately messaged to Margaret that he was my student.

CHAIR POWELL-PALM: Okay.

MEMBER NANDWANI: Just wanted to say that and --

CHAIR POWELL-PALM: Fantastic.

MEMBER NANDWANI: So since I asked that, can I ask that -- so African-American
students, and there are a lot of African-American farmers who are minority farmers and I deal with them almost every day. Do you say it's a good sign that African-American also whether students or trainees are coming to get this inspection training and it's -- I think it's a good sign, isn't it?

MS. SCOLES: I definitely think it's a good sign.

MEMBER NANDWANI: Thank you for your comments. I appreciate it.

MS. SCOLES: Thanks.

CHAIR POWELL-PALM: Liz has a question for you.

MEMBER GRAZNAK: I was just curious to know -- so you said that you received some funding from NOP. Did I hear that correctly?

MS. SCOLES: Right.

MEMBER GRAZNAK: Yes. How long is the funding stint, how long is it for?

MS. SCOLES: It's just a one year project.
MEMBER GRAZNAK: Yes.

MS. SCOLES: And it finishes in September. So it -- during this year, we're developing a tool kit for apprenticeship. And that includes some training with groups that are selected to run through it and give evaluation feedback, and hopefully improve the final product of the tool kit.

MEMBER GRAZNAK: And what about for future years, how do you see being able to afford doing this work? Say next year without the funding?

MS. SCOLES: We do think there's going to have to be some government support, and there's a lot of different ways it could go. Because an intensive apprenticeship intensive that takes a whole year and takes small groups of five or six people to four farms, it's very expensive compared to -- people say now sometimes basic training is expensive. It's actually very cheap compared to what it costs to do this type of training which
we feel like is a really viable learning option but making it affordable. We are investigating partnering with universities and maybe with apprenticeship.gov which is a program that you can develop apprenticeship that is supported partially by the government. And we think that people should pay something to take the training. These people are not paying anything, but we do believe there should be participation to commitment and hopefully certification agency are actually -- are likely as they currently send a lot of people to basic training, they would probably pay part of the cost to put new inspectors through the program. Because it takes a lot of work to onboard a new inspector if it's a way to do it efficiently and more effectively, that means that it isn't expensive, it's a good bargain. Thanks for your question.

MEMBER GRAZNAK: Sure. Thank you.

CHAIR POWELL-PALM: Any other questions for Margaret? All right. Really
appreciate your time and work Margaret. Thank
you. Lastly we have Kris. Kris, are you on the
line?

MR. KLOKKENGA: Yes, I am.

CHAIR POWELL-PALM: All right.

Please go ahead.

MR. KLOKKENGA: Hi. My name is Kris
Klokkenga. I will apologize that I missed my time
slot earlier because I didn't realize you were on
a different time zone than I'm in. So I'm located
in Central Illinois and halfway between Chicago
and St. Louis. I am an organic farmer here, and
I wanted to speak regarding the regulations for
importing organic grain from other countries. I
have -- my previous experience, I worked in Ghana,
West Africa from 2008 to 2016 for two years with
an agricultural processor specifically processing
shea nuts and then for the next six years, I had
my own farm there where I grew two crops of corn
for four years basically. And so just -- I just
want to speak with the -- to the integrity a little bit, of how grain from those other countries and just wanted to give an opinion that it can be very -- just seeing -- I didn't work specifically in the organic atmosphere when I was there, but just wanted to say that the integrity that is practiced in developing countries can sometimes be questionable. The other thing for me is just in regards to being able to have markets. Since I'm in Central Illinois, I try to practice a robust crop rotation used in corn and soy beans primarily, but also wanting to grow alfalfa, barley, oats, and especially when it comes to marketing my small grains in my location, even though they help me on my -- with my rotation and my soil health, I feel like when we bring in grain from other countries, then that hinders the local farmer or the domestic farmer, organic farmer here in the United States. And so I also recognize that if you're going to have regulation for the internet, I would also speak that it's not only necessary
to have regulations for the importing of grain, but also for domestic end-users that they're able to take notice of, you know, the delivery, the traceability every time that I submitted a load of grain, I've submit a bill of lading. How are those being used, and what in what ways are they traced through the process? So I just want to thank you for your time here today to listen to me, and be happy to take any questions if you have them, but just want to also just reiterate that, I just think that it's necessary to have those regulations in place and I would employ yes, we try to, you know, limit the amount of organic grain that can be important in the United States.

CHAIR POWELL-PALM: Really appreciate you taking the time to speak with us today. Any questions for Kris from the Board? Amy, please go ahead.

MEMBER BRUCH: Sure, Kris, thanks for your time today really appreciate it. Bring up a couple of big topics on integrity and market
viability. The question you mentioned at the end about those with lading. Have you ever seen on your reconciliation form that you or your settlement sheet that you received from your grain buyer any indication of your lot number, your lot tracking system?

MR. KLOKKENGA: In my settlement sheets that I received, I have not seen that. I deliver grain to or I supply grain to three or four end-users and I have not I of course we have to submit a bill of lading each time, but outside of me having that bill of lading, I'm not sure what -- so the answer to your question is no.

MEMBER BRUCH: Thank you. That's definitely something that we'll be talking about in our upcoming board meetings so I appreciate your input.

MR. KLOKKENGA: Yes.

CHAIR POWELL-PALM: Thank you. Yes.

Kim, please go ahead.

MEMBER HUSEMAN: Hi, Kris, thank you
for your comments today. Maybe small follow-up from Amy's question about BOLs. Does your certifying body reconcile your acres and yields for you on an annualized pieces?

MR. KLOKKENGA: Yes. Every year the certifier that I use goes through this mass balance has to be calculated, then that has to come into a certain, whatever is an acceptable range for them after I provide them all of my settlement sheets.

MEMBER HUSEMAN: So you do provide that your settlement sheets to your certifying body?

MR. KLOKKENGA: Yes, I provide -- so I -- my yes, I do. They require all of that. But from the settlement sheets, there's no place on there that you're seeing my reference bill of lading number to my -- to the best of my knowledge.

MEMBER HUSEMAN: Thank you.

CHAIR POWELL-PALM: So if I may offer just one clarification question on that real quick. So you have all of your settlement sheets from your buyer, you have all the bills of lading you
submitted, but there's not really connector
between them other than your name?

MR. KLOKKENGA: Other than my name and
the load numbers that go, you know, I mean, like
-- so the way that I do it is that I state my contract
number and then load number. So load number 1,
I know that that was the first date that, you know,
and then your dates would march up there to
everything. If you delivered two in a day, then
you'd be able to see that, but that is how -- that's
one way for them to reconcile that.

CHAIR POWELL-PALM: Sure. Thank you.

Dilip, do you have a question?

MEMBER NANDWANI: Yes. Very quick.

Thank you for your comments, Kris, really
appreciated your thoughts. This is a quick
question. We've been hearing a lot about the, you
know, this incubatory and fraud and organic buses,
you know, conventional. So do you know or do you
have any tools or your certifier which can test
or identify versus conventional methods? I know
that there are some tools which you can use to
detect genetically thing and GM and some of the
contamination. But other than that, are you aware
of that? Thank you.

MR. KLOKKENGA: Thank you, Dilip, for
your question. I am not -- the only way that I
am aware -- I mean, I don't think that you could
-- if my neighbor grew non-GMO soy beans and tried
to market them as organic, I don't know that there
would be any way that one could differentiate that.
I'm not aware of any test except a non-GMO test,
but maybe something else exists.

CHAIR POWELL-PALM: Thank you. Kim,
please go ahead.

MEMBER HUSEMAN: I'm going to ask one
more follow up for Kris and it's a slightly
different topic. But you had mentioned earlier
about growing crops to feed the soil and the
systemic nature of your organization or it were
your crop rotation --

MR. KLOKKENGA: Right.
MEMBER HUSEMAN: -- you know, the livestock group and this is reason why I'm bringing this up is part of our research priorities. Because to your point, corn and soy are the backbone to feeding any livestock in the U.S., whether it's organic or conventional. But we know that's in order to create the holistic system that other grains, other legumes, other seed need to be introduced into the soil, but there's always the hindrance from a marketing standpoint. Can you elaborate on some of the marketing hindrances or resources that you might be to have found to be hopeful to help market some of the other small grains. Oats, or barley, or sunflowers, or, you know, alfalfa just, can elaborate in that space if you would, please?

MR. KLOKKENGA: Okay. So this was my first year and growing alfalfa and I'm growing alfalfa for my benefit to introduce a different hormone into the soil to hope help with weed control
the following year. So I'm doing oats and alfalfa one year as a nurse crop in the alfalfa. So one of the ways that I marketing that which I have not been able to market my alfalfa organically because I am in such -- in Central Illinois here, I'm in such a livestock deficit. There's almost no livestock around me. So what I found myself doing is I'm traveling then 120 miles south to St. Louis where I'm trying to meet and I found this on hayexchange.com is just so I'm not if I'm just using a website there to try to get my product marketed, but I don't really have a connection to figure out where the organic farmers in my area that could use that. So I don't have access to that. And then so that's one. And then like barley, this year with my barley, it's first time for me growing that and I'm going to go ahead and probably reach out to the gentlemen that sold me the seed and find out, you know, where can I go with that? But like also on my oats -- the oats I'm growing, they're not -- I'm not growing those organic oats, because
I've just -- the only place that I've been able to find to market my oats, is to a seed company, that just wants me to grow oat seed for them and since nobody else in our area really participates in a lot of oats growing, you won't find it much in Central Illinois. They're happy to have me even though they're organic. I just saw them to them as a non-organic oat, even though it's produced organically.

MEMBER HUSEMAN: Thank you. This is an area, I think, where we are seeing more focus needing to be put. It's really high on my radar and having input it from you and other farmers in the space is really important. So I really appreciate your time.

MR. KLOKKENGA: Yes. Well, thank you. I hope that you're able to find better ways for us to market the products that we produce.

CHAIR POWELL-PALM: Javier has a question for you.

MEMBER ZAMORA: Kris, thank you so much
for your comments and I feel that your feelings express that there is no clear method that is being utilized to identify where the fraud is happening.

And I, as a grower, I hear a lot of people, you know, bringing the subject, but what do you have -- do you have an example of how to really identify these things? Do you think testing will probably just take care of it as a fellow member alluded to earlier? Instead of -- because it seems like paperwork has a greater chance to be, you know, kind of falsified and be creative with. So what do you see? How can this Board make things easier to identify where something out of order is happening?

MR. KLOKKENGA: I just think that -- so I don't have -- there's not one great idea that I'm -- that I can give you. But one thing that I would say is this, if you could have some kind of way that you are going to require that each person, like for the bill of lading example, like me as a grower that I sell to the next elevator
who processes my grain and sells it onto a corn
tortilla manufacturer, that they might be able to
-- that you might be able to streamline that process
amongst the producer, the middleman, and the
end-user so that that could be done. I don't know
that you're going to find -- I don't know what test
to tell you to do and I'm not familiar with that,
but I would just say streamlining that process and
maybe just giving -- I don't know if you would call
that all the paperwork that we do is antiquated,
but maybe just finding out more of a helpful way
using technology to be able to streamline that
process. And, again, I'm sure that that would --
there's -- fraud can happen in that way as well,
but something being able to go from the producer
to the end-user and maybe having some way that they
can identify that. Thank you.

CHAIR POWELL-PALM: Thank you so much
for fielding all these questions, Kris. Really
appreciate your time today. Well, I'm -- and like
I said, several times before, the farmer
perspective is invaluable. So thank you for making the time and taking it out of your schedule.

MR. KLOKKENGA: Thank you.

CHAIR POWELL-PALM: All right, folks, we've made it to the end of day 2, so that concludes today's public comment webinar and I can't thank everyone enough for taking the time out of their days to join us. This is what makes our community great and I'm really excited for next week's meeting. If there are any closing questions or comments from the Board, we can fill them now, otherwise, we will let you all to your day. All right. Well, thank you again, everybody.

MR. KLOKKENGA: Thank you.

MEMBER CALDWELL: Thanks, everybody.

MEMBER HUSEMAN: Thank you.

CHAIR POWELL-PALM: Jared Clarke

MEMBER ZAMORA: Adios.

CHAIR POWELL-PALM: All right. So thank you for the slides and next week's NOSB meeting, hope you all are there too. It's going
to be start on Tuesday, April 26 at noon Eastern
and anything you'd like to say about that, 
Michelle?

MS. ARSENAULT: No. I think you're
good. The link to join the meeting is on the NOSB
meeting webpage. It's also at the top of your
agenda.

(Whereupon, the above-entitled matter
went off the record at 4:38 p.m.)
The Board met via Videoconference at 12:00 p.m., Nate Powell-Palm, Chair, presiding.

PRESENT
NATE POWELL-PALM, Chair
MINDEE JEFFERY, Vice Chair
KYLIA SMITH, Secretary
AMY BRUCH
BRIAN CALDWELL
JERRY D'AMORE
CAROLYN DIMITRI
ELIZABETH GRAZNAK
RICK GREENWOOD
KIM HUSEMAN
ALLISON JOHNSON
DILIP NANDWANI
LOGAN PETREY
WOOD TURNER
JAVIER ZAMORA
NOP STAFF PRESENT
MICHELLE ARSENAULT, Advisory Committee Specialist
JARED CLARK, National List Manager
DAVID GLASGOW, National Organic Program Associate Deputy Administrator
ERIN HEALY, Standards Division Director
ANDREA HOLM, Materials Specialist
DEVON PATILLO, Standards Acting Assistant Director
DR. JENNIFER TUCKER, National Organic Program Deputy Administrator; Designated Federal Officer

ALSO PRESENT
SEAN BABINGTON, Senior Climate Advisor, USDA
ADAM CHAMBERS, Scientific Lead for Environmental Markets, Natural Resources Conservation Service (NRCS)
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MS. ARSENAULT: Our attendees are jumping up again here. Welcome, folks. So I think we'll get started. Good, Nate. Ready to get started?

MR. POWELL-PALM: Let's do it.

MS. ARSENAULT: All right. So welcome, folks. It's day one of the National Organic Standards Board spring meeting. If you are -- attendees are in listen only mode, so you will not have access to your mic or a camera. The chat is enabled, however, so feel free to chat in, say hello, let people know where you're calling in from. And you can chat with each other, and you should be able to chat with everybody or one person if you so choose.

Chats are not part of the public record. So if you're asking questions of the board, we won't be answering those questions, and it won't be part of the record. We do have a transcriptionist on the line with us, and we do
have the live transcripts enabled. So if you go to the bottom part of your Zoom task bar -- might be at the top for you -- you will see the -- you'll see the CC button or the live transcript button. You can keep it on or turn it off if you don't care to watch it, and you can also adjust the font size by using the carrot next to the CC button.

You can customize your own view in Zoom as well. So where -- we'll be sharing slides in the main panel. You can make everything smaller, bigger, using the view button, which is in the upper right-hand side of your Zoom window. You can tailor it to what you want to see. The webinar is being recorded, and we will post the transcript on NOP website as soon as the -- it's available, which is usually a couple of weeks after the conclusion of the NOSB meeting. All right. Jenny, I'm going to turn it over to you to get us officially started.

DR. TUCKER: All right. So welcome. And good morning. Good afternoon. And good evening. Wherever you are, I know we have folks
from across many, many time zones today. Thank you all for being here. My name is Jennifer Tucker. I'm the Deputy Administrator of the National Organic Program. Welcome to all of our National Organic Standards Board members and our public audience.

After two successful public webinars last week, I am really glad to be with you these three days. I'd like to again, acknowledge and celebrate our four new board members, Liz Graznak from Missouri, Alison Johnson from California, Dr. Dilip Nandwani from Tennessee, and Javier Zamora from California. They started their work on the Board this spring. I'd like to give them all a round of a Zoom applause. So if you're at home, you can wave your hands into the camera and that's how we applaud on Zoom.

So this webinar continues our public meeting that started on April the 19th and runs through April 28th. Meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website. Transcripts for
all segments will be posted once completed.

This meeting, like other meetings of the Natural Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's policy and procedures manual. I will act as the designated federal officer for all meeting segments. Let's take a look at the agenda, and I will introduce the NOPT.

First, the agenda. We are meeting from 12:00 to 5:00 Eastern today, tomorrow, and Thursday, with an hour break in the middle of each day. Today, the board chair and secretary will get us started. We'll have two USDA guest speakers to talk about the Department's work on climate smart agriculture. We will follow that with an NOP update, and an NOP, NOSB discussion.

Then we'll move into subcommittee work, which will extend all the way into Thursday with closing activities and a look ahead. So turning to team introductions, I thank the national organic program team. Michelle Arsenault is our advisory board specialist. Michelle, you've now been with
us in the Board ten years, correct?

You're nodding, that's an amazing ten years. So her dedication to this work and to members over ten years makes a real difference in the organic sector. So Michelle, thank you.

Let's all give Michelle a huge hand for ten years of service to this board.

I am also grateful for the leadership of our standards division director Erin Healy. Erin's leadership has been greatly appreciated as we have added and on-boarded new staff in standards this year, and we've moved a lot of rules ahead. So I've been very grateful to have her in that role.

Jared Clark is our national list manager and continues to do amazing work in supporting the world -- the board, advancing rules quickly, providing endless expertise on a variety of national list questions, and just being an all around really nice person and good guy. So Jared, glad you're here.

Andrea Holm is one of our three material
specialists in the program, has been doing fabulous work helping us present our work effectively on webinars like this. Andrea is always in the background, getting people promoted in this system, figuring things out, chatting with us on the side, on the things we need to pay attention to.

She's also been leading a special project to overhaul our petition substances database. And I believe that's going to be rolled out quickly. But she's really spearheaded that in recent months. And as -- I think it's going to be a great service once launched.

And we have Devon Pattillo, who is currently our acting standards assistant director, and has worked extensively on current livestock roles, as well as many, many other briefing memos and documents. So thank you so much. So big applause to the NOPT. It takes a lot of people to make these meetings happen, and genuinely appreciate all of their support.

Next, Nate Powell-Palm, the Board
Chair, will introduce board members. All of these representatives devote hours and hours of volunteer time to serve the organic community. Most have not even met each other face to face yet, and yet are doing wonderful work together. So let's give the Board a full round of applause and appreciation. Thank you, Nate, in advance, for a great meeting. And I now turn it over to you.

MR. POWELL-PALM: Thank you, Jenny. Really appreciate it. I think this is one of the more -- the most fun parts of the meeting is to get to know the board members a little bit. So I'm going to call on folks in alphabetical order. And if you would just give a little bit of background on what you do in the organic industry. If you're a farmer, what you grow. If you're in another sector, kind of how you came to organics, and what your everyday looks like would be great. Also, where are you? What state do you hail from? And I think that gives everyone a little bit of a glimpse into the folks who are serving on the board right now. To get kicked off,
we have Amy Bruch, and then Brian Caldwell will be next. So, Amy, please go ahead.

    MS. BRUCH: All right. Thanks, Nate.

    Hi, everybody. My name is Amy Bruch. I serve in the farmer's seat for the NOSB. I'm a sixth generation farmer and president of my family farming operation located in east central Nebraska. We grow a variety of different organic row crops -- organic and transitioned to organic grow crops, including blue and white corn for chips and tortillas, soy beans, small grains, pulses, oil seeds.

    And in our operation is all irrigated.

    In addition to my family farm experience, my background is ag engineering. I've had 20 years in various agribusiness opportunities, including food production and farm management, both in several states and overseas as well. Very happy to be here and to be able to serve on the Board.

    Thank you.

    MR. POWELL-PALM: Grateful for your service and your time. Brian is going to be next,
followed by Jerry.

MR. CALDWELL: Hey, everybody. Brian Caldwell. I am serving in a public interest and consumer interest seat on board. Sponsored by NOFA New York -- the Northeast Organic Farming Association of New York, that helped me get into this august body. And I'm retired from Cornell University, where I did research on organic farming for quite a few years. And I've had a small farm the whole time, even when I was working.

And now that I'm retired and I'm kind of focused more on the farm. I can't imagine how I did it all in my spare time back in the past, but I did, somehow. But we've been certified since 1986, and started out with vegetables. But now it's pretty much converted all over to fruit and nut crops. We're in central New York state. And I guess that's it. Thank you very much.

MR. POWELL-PALM: Thank you, Brian. Appreciate your service to the Board and your insights. Jerry's up next, followed by Carolyn.

DR. TUCKER: Jerry, you're muted.
MR. D'AMORE: Thank you. May that be the last time today. I was just telling Nate that he had thrown me a monkey wrench because when I was doing the bulk of my owning and operating of production facilities that we didn't have the order.

MS. ARSENAULT: Jerry, you're a little faint. I can barely hear you.

MR. D'AMORE: I don't know how to fix that unless I just talk up.

MR. POWELL-PALM: That better, definitely.

MR. D'AMORE: Okay. I thank -- thank you. I've been involved in the growing and marketing of fruits and vegetables for nearly 50 years now. My start was in Saudi Arabia in the mid '70s, where I built and operated hydroponic farms on the Wadi Hanifa. For much of the '80s, I built, owned, operated both NFT and inert medium based hydroponic farms growing local profile crops, and buying crops, primarily tomatoes, peppers, cucumbers, and lettuces.
And at the point where I was doing that, there was not an organic label. That was the point that I was trying to make earlier. I then moved to Turkey for six years with my family and represented Chiquita in the Black Sea region, including Bulgaria, Romania, Ukraine, and Russia. And by the end of the '90s, I settled in California and dedicated much of my time to berry crops for the next 22 years. Thank you very much, pleasure be with all of you, and thanks.

MR. POWELL-PALM: Thank you, Jerry. Next up we have Carolyn, followed by Rick. Carolyn, please go ahead.

DR. DIMITRI: Thank you. I'm Carolyn Dimitri. I'm a professor at New York University. I'm an applied economist. Before I joined the NYU faculty, I was an economic researcher at the Economic Research Service of the Department of Agriculture. I sit in a consumer seat, and I have fairly extensive research, applied economic research body on the post farm segment of the organic sector. And I'm happy to be here. As well
as a consumer of organic food, and a supporter of
organic food, thank you.

MR. POWELL-PALM: And those numbers are important. Your research helps all of us communicate what organic says and what it means.

So thank you for your work. Next up, we have Rick, followed by Liz.

MR. GREENWOOD: Okay. Well, hello everyone. Rick Greenwood, I'm in the environmental seat. Long time faculty member at UCLA in environmental health and epidemiology. Have been a certified organic avocado grower for about 15 years in Southern California, a medium-size farm, sort of an -- average for California. But the real problem we face, and I'm everyone has seen it, is drought. It's really devastating, in particular, the avocado grow, because they take so much water to grow.

But I came to this because my interest actually in science based public policy, and I also did a three-year term on the Haas avocado board as part of AMS. So happy to be here. Also the
longest serving member, and the only member whose actually been to an actual live meeting. So looking forward to getting back to that in -- when we go up to Northern California. So thank you.

MR. POWELL-PALM: Thank you, Rick. We appreciate you being this bridge to everything that is in-person for us. Since yes, we have 14 folks who have never served on the Board at a public meeting, and Rick. All right, next up we have Liz, followed by Kim. Liz, please go ahead. Oh, you're still muted Liz

MR. GREENWOOD: How about that?

MR. POWELL-PALM: Great.

MS. GRAZNAK: My name is Liz Graznak. I am in Central Missouri, and I'm a brand new board member, also serving in the environmental protection seat. I run and operate a small scale, about 11 acres, very highly diversified certified farm in Missouri. I have a CSA, community supported agriculture program. I sell 50 weeks a year at a farmer's market. It's the largest growers-only market in the state of Missouri. And
first generation farmer. So yeah. That's what I do. I'm a farmer.

MR. POWELL-PALM: So we are very excited for your input, and thank you for your service. Next up is Kim, followed by Mindee.

MS. HUSEMAN: Good morning from Colorado. My name is Kimberly Huseman. I sit in a handlers seat. I am coming into my third year on the organic board. Got to meet some of my fellow -- call them classmates at an introduction meeting right before everything went virtual. So very few people have I actually been able to spend time with, and I'm looking forward to our fall meeting in order to shake people's hands.

I work for Pilgrims. I have developed and I manage our organic ingredient procurement team. Been with the company for a little over eight years. We're a large scale poultry production, mostly across the Southeast, with specific dedicated organic production in North Carolina.

I've previously worked in both the
conventional and the organic sectors, whether it be feeding animals, where I also grew up on a large scale farming and ranching operation in southeast Wyoming, where we had about 300 head of cow-calf pairs, row crops, and alfalfa that fed into the dairy market here in northern Colorado. Decided to be on the board for another year, and looking forward to all the things yet to come in the second half of our tenure.

MR. POWELL-PALM: I cling to that intro meeting we all had with our class also, because it's our one proof that we're all real.

MS. HUSEMAN: That's right.

MR. POWELL-PALM: Thank you for your time and service, Kim. Next up we have Mindee, followed by Allison.

MS. JEFFERY: Thank you. My name is Mindee Jeffrey. I'm in northern California, serving in the retailer seat. I spent about 20 years around different organic retailing environments. Worker-owned co-op, a co-op, a co-op of retailers, but most of that time at Good
Earth Natural Foods in northern California. And sort of oddly got lucky in the pandemic in the changing of jobs.

I was able to move over from doing a lot of organic education in the stores for the consumers and the retailers to running their compost program. So I get to spend -- go three days a week in the stores and come back to the farm and learn about nutrients, and inputs, and row crops. So I'm super excited to be on the board. And I spent five years on the California Organic Products Advisory Committee, which really taught me a lot about how to listen to all sectors of the organic stakeholder community, and really learned a lot in that environment, really helping me in this environment. So thank you.

MR. POWELL-PALM: Thank you so much. Your voice is invaluable. So thank you for your time and service. Next up, we have Allison, followed by Dilip.

MS. JOHNSON: Hi everyone. I'm Allison Johnson. I'm in the public interest
consumer seat, and I'm based in Oakland, California. I've spent my career in sustainable food systems kind of broadly, and I started in organic as a handling certifier at CCOF, back in my hometown of Santa Cruz, California. And after a few years there, kind of surveying the landscape and the challenges that our members face, I decided to go to law school to learn legalese and figure out how to wrangle our policy beast to better support all the people who I was interacting with every day.

So I currently work at the Natural Resources Defense Counsel tending to do policy advocacy, and change our policies to support organic and sustainable agriculture. I'm not a farmer, but a plant enthusiast, and I'm about to put in my first fruit trees ever. So I'm very excited about that, and happy to be here with you all.

MR. POWELL-PALM: Thank you for your time and service, we really appreciate your insights. And you're about to be a farmer, so get
ready for that crown. Once that's -- once those
fruit trees go in. Next step, we've got Dilip
followed by by Logan.

DR. NANDWANI: Good morning. My name
is Dilip Nandwani. I'm a professor at Tennessee
State University and I do research, extension, and
teaching in organic agriculture. My primary
responsibility is to work with small farmers. So
the research I've been doing in organic vegetable
production and the fruits, as well as training to
the farmers on organic certification process and
regulations since almost ten years here in
Tennessee.

I'm based in Nashville, and we do have
a certified organic farm for research, education,
and extension purpose where students, they come
and do their research projects. And farmers, they
come, producers, they come a small farm expo, and
lot of things that extension events we do at the
farm. As well as I teach a small kind of a course
on organic agriculture principles. So far,
organic agriculture as well as sustainable
agriculture. And I have a few books on organic agriculture, sustainable agriculture, and all that.

Prior to Tennessee, I was in the US Virgin Islands, beautiful island, where I was also teaching horticulture and organic agriculture. I've been working with minority growers in Virgin Islands and here in Tennessee. And prior to Virgin Islands, I was in American Pacific or Micronesia. Only few people didn't know that we have a land grant college in American Pacific. So those are beautiful islands, I spent almost 10 years there. Even before this organic seal came into existence in '90s, I spend there.

I'm serving on Tennessee Organic Growers Association, we call it TOGA board, as well as Southern Cover Crops Council board, SCCC, which is a regional board. I'm in Southern Nashville, so located in southern here in Tennessee. My primary research, as I mentioned, fruits and vegetables, basically production issues, dealing and helping farmers.
I do serve on the chair on Organic World Group and International Society of Horticultural Science, on subtropical and tropical fruits, which I just give up as soon as I got on NOSB. And also, I served as a chair for organic horticulture in American Society for Horticultural Science. I'm glad to be here, very honored. Thank you.

MR. POWELL-PALM: It's with no small amount of pleasure that we get to say -- when we have a question for Dilip, he literally wrote the book on it. So we're really grateful for your time and expertise. Next up, we have Logan Petrey, followed by Kyla Smith.

MS. PETREY: Hi, I'm Logan Petrey. I'm in the farmer seat, fourth generation farmer as conventional farmers go, so I'm first generation with organics. I currently am a farm manager for Grimmway Farms in the southeast. It's their only operation here, and we're actually in north Florida. And just to echo Rick's statement about the water crisis that could be in California. So Grimmway is looking to go in other regions and we
are -- we're here. We're trying it out. It's very
different from California, for lots of different
reasons.

But we -- our main crop here is carrots.

That's what carrots supply. I didn't know that,
until I got Grimmway. We grow different produce
from where I grew up, but -- and so among the care,
it's of course organic. You have a lot of
different rotational crops, including other veg
items, corn, soybeans, peanuts, beans, you know,
those things. And so again, trying to figure this
out, and excited to be here and to represent
Grimmway, which is one of the largest organic
vegetable growers in the country. So thank you.

MR. POWELL-PALM: Thank you so much, Logan. We're really grateful to have your voice
on this board. So thank you for your time and
service. Next up, we have Kyla Smith, followed
by Wood.

MS. SMITH: Thanks, Nate. Hi, everybody, my name is Kyla Smith. I'm serving in
the certifier seat. My day job is -- has me --
that I've been working with Pennsylvania Certified Organic, which is a USDA accredited certifier, based in Pennsylvania, but we certify across the US, but mostly up and down the East Coast. I'm currently serving in the certification director role there, but I've done almost every job. It's like I -- it's what I like to say. I've done inspection, policy work, review work, and I've been in certification for almost 20 years.

And I look forward to going to an in-person meeting for sure, because I've been a long time NOSB groupie, and so have attended lots of meetings over the year, but on the other side of the table. So I look forward to being with you all in Sacramento. And I'm just, yeah, excited to be working with Nate and Mindee in the leadership of the Board, as I'm serving in the secretary role currently, and it's been super fun.

And I'm just hoping to bring the certifier voice into these conversations, as we're the ones that have to sort of figure all -- most of these things out, all the rules and how they
actually apply, boots on the ground. So sort of that conduit between the producer and the program. And so we aim for consistency. I'm a cross certifier, and so the work that the Board does is super important to try to inch that needle towards consistency everyday. So thanks for allowing me this honor of being in this role. It's fun.

MR. POWELL-PALM: The honor's ours. Thank you for stepping up and serving as -- in the secretary seat, but also on the board. You -- your voice is incredibly valuable, and we really appreciate your time. Next up is Wood, followed by Javier.

MR. TURNER: Hey, everyone. I'm Wood Turner, and I'm also thrilled to be in my third year of this kind of unique public service that we call the NOSB. It's been an incredible experience for me so far. I am the head of Global Impact for environmental and social impact first for agriculture capital, and I'm based in Berkeley, California. We're a grower, packer, shipper of blueberries, hazelnuts, citrus, and table grapes,
specifically. And relevant to this work is our roles in organic blueberry and table grapes producer.

I'm trained as an environmental planner and designer. I grew up in rural North Carolina, but I spent my career in Washington State, New Hampshire, and California. Focused on and spent my career 30 years -- goes by really fast, really -- 30 years focused on sustainability, spanning the non-profit consulting and then more recently with building purpose driven brands.

I -- previously to joining agriculture capital and moved to California, I was in New Hampshire leading sustainability of personal farm. So have experience in permanent crops, but also in the dairy world. And I'll try my best to bring that experience today on this work every day. So thanks.

MR. POWELL-PALM: We really appreciate your time and input. I think as part of our -- Kim, and my, and Wood's original class, I really am grateful that I got to meet you in person and
excited to see you again in the fall. Lastly, is

going to be Javier, and then I will finish us out.

MR. ZAMORA: Hi, good morning to all

of you. Buenos dias. Javier Zamora from

beautiful Watsonville. This is my ten. That's

farming, not really Cancun. This is truly an honor

for me to be on the farmer's seat for the NOSB.

I am a first generation farmer in America,

probably fourth generation coming out of Mexico,

from my parents.

I grow strawberries, raspberries,

vegetables, flowers, all certified organic through

CCOF here in beautiful Santa Cruz. And it's --

I'm bringing just the experience of boots on the

ground on a daily basis. I was actually moving

boxes this morning before I came in the office to

be in front of you. My hope is that I can represent

the small mid-size grower, especially the Latino

farmers that are -- they need a little more help

bridging the gap that exist these days among the

farming communities, especially organic. Muchas

gracias.
MR. POWELL-PALM: And thank you for your time and contributions, Javier. I think every time I get the chance to reflect on our board, I always come back to how incredible it is. The expertise that we all bring, and how rich the dialogues are that we have. And from farmers, actually in the field, jumping on calls from the cell phone -- myself being one of those -- to folks, who can really bring the insights into how we can prove this incredible movement that we're all part of.

I sit in real gratitude to you-all. So my name is Nate Powell-Palm. I'm based out in Bozeman, Montana, and behind me is my last year's crop of field peas. We raise yellow peas, and flax, and durham, as well as beef cattle and forages. For about ten years, I've also served as an organic inspector, inspecting in about 41 states, doing a little more than 3,000 inspections around the country.

And there's been moments as a farmer and as an inspector that I really appreciate folks
like Kyla keeping this whole band wagon together as a certifier, because it is a heavy lift. As we dive in today, I think that there's a lot of really great things for reflect upon, which I'll save for in just a bit. But I wanted to just express my most sincere gratitude to my fellow board members.

It's a volunteer position. Everyone shows up with all of their expertise and hard work, and I can't think of -- I don't think I'll ever have a greater honor than the chance to serve on this board with this group. So really grateful that we get to do it together. And with that, we are going to toss it over to Kyla for the secretary's report.

MS. SMITH: Thanks, Nate. The minutes were provided to all the board members well ahead of the meeting for review. And so asking now, do you have -- or do you accept the meeting minutes from October 2021 of the NOSB meeting as they are written, or are there any corrections? I see no corrections. So with that, we can call the minutes
from the October 2021 NOSB meeting approved, and
I will hand it back to you, Nate.

MR. POWELL-PALM: Thank you. We're
doing great on timing, wow, right to the minute.
So I -- I'm always grateful for the chair's report
opportunity. I was thinking back to my
predecessor's really insightful report on how
we're doing as a board, but ultimately, where we
need to go to harness this incredible movement that
we're all part of. So as I was thinking about what
I'd like to share with you all about the state of
the board and about my vision that I hope we're
able to see come to fruition.

A little bit of background on my
experience with organics. So I somehow convinced
my parents when I was 12 that they should buy me
three bred cows so that I could be a rancher. And
while they said, we don't have the money to buy
them for you, you can go out and get a loan to buy
them yourself. And somehow the Montana Department
of Agriculture said, sure, we'll give a 12-year-old
a loan. And that's, I think, an example of
government working really well.

So I was able to get this loan that allowed me to buy three bred cows and start my small cow-calf operation. We really quickly -- I learned that three bred cows was not going to make a career, even for a 12-year-old at the time. And I needed to figure out where is there more value. Where is there a way that I could be realizing more value for the products, the food that I'm creating.

And so I got hooked up into the the world of organic through a couple of ladies, about an hour from me, who made organic chicken feed. And they introduced me to this world that folks just do things differently. They take care of each other differently. They take care of the land differently. And so building on that, I've been able to ultimately realize this career in agriculture that I was always a little shaky on if it would actually come to be.

While doing that in building my operation, I had the chance to see a lot of
operations in action as an organic inspector. And so for 10 years, I saw this promise of organic lived out in factories and on farms across America. What does organic food mean for everybody? And I think when I look at how lucky I've been to be able to start a first generation operation that provides a living for myself, that's something that I've tried to figure out.

What is it that makes it possible for me to pass this on, to not only the next generation, but the next five years? How do we keep this going in a way that folks like myself can realize these opportunities? First generation farmers, historically disadvantaged farmers. How do we make it so that organic is this vehicle to creating a world of agriculture that we also believed in?

When I first got the call from Jenny saying that I had been appointed to the Board, one thing that immediately popped into my mind was, maybe this isn't such a good idea to serve. It's a big deal, it's a big job, but it's also pretty contentious. You know, I've heard nothing but the
stories of board members being like, oh, man. I don't know why I did this. This is a lot of work. This is not a lot of love for -- from the community when it comes to making these hard decisions.

And so I went into my service with that in the back of my mind, how do we ultimately realize the potential of this board? And I think I realized it over the course of these three years so far through incredible collaboration. And I don't know if I've just lucked out and my fellow board members are folks who look around every day and say, how do we really take the opportunity we've been given as members and as leaders of the organic community, and make some change?

And so again, I thank all of you, my fellow board members, for the incredible hard work that you've put in making this beast happen. When we look at the potential of organics and the potential of this collaboration, I also look around to our place in fighting climate change. When we consider the potential that organic has to be the climate smart solution, we're really looking at
26,000 certified operations and many thousand more, who are potentially transiting to organic, as folks who have in their own power in the soil beneath their feet, in the practices they use on the farm, the potential to really scale up a real meaningful fight against climate change.

And I think one thing when I look around -- and I realize I'm on the younger side of board chairs. But when I look around, I do think we have very little time. We don't have time to be ever fighting amongst ourselves. We don't have time to be doing anything but looking really straight ahead, figuring out where is the collaboration and where is the opportunity to pull together towards this shared vision -- the shared, hopeful future reality.

And I think we're doing that on NOSB right now, which is why every time I call into one of our subcommittee calls, I'm really excited. I think in the past year, we've had a lot of new members come on and each one of those members has, I think exceeded everyone's expectations for how
much better we can get with every single new member. And what we can realize as a team.

And I think that we'll see over the next few days that we are crushing it. There is a lot of hard work, hard decisions being made, and folks are bringing their very best writing, their very best debates to this discussion. When looking back at the fall meeting, I think an example of our deep and really healthy collaboration was the vote on ammonia extracts, that we were able to have a tough debate and really hear all sides and have folks walk away feeling like, we were heard, and this is nothing but an opportunity to grow.

We were able to have something that I thought was, you know, possibly a point of fissure for the community, ultimately get worked out, get voted upon, realized fairly good unanimity, and leave each other still texting each other high fives. That this is still something we all want to be a part of. This is still something that is meaningful to all of us.

So I think when we talk about what we
perceive as existential crises in organic, I think we all want to remember that this is still so worth protecting. No matter how hard the debates, no matter what we deem our wins or our losses, the movements, the creation of the organic standards is something we can all agree upon is worth fighting for and worth defending, and ultimately worth all of our time and our expertise.

So as we move in today, we're going to have a lot of discussions about how we improve organics, and we're going to have some really great debates about where we think it should go. But at the end of the day, I am really grateful to you all, my fellow board members, for taking such an exceptional professional approach to this work and making it so that we all feel safe, we all feel heard, and, especially we feel like we're doing the best we can to make meaningful change. So I realize I'm a little bit ahead of schedule, but with that, I would like to hand it back to Dr. Tucker.

DR. TUCKER: Nate, thank you so, so
much for those comments, and thank you to all the board members. Yeah. Let's give Nate a round of applause. Thank you, Jerry. Very, very, very nicely put. And a true honor to work with all of you. I'm so glad we take the time to do the board introductions at the beginning of this process.

It is an exercise in democracy, but also for me, humility of seeing the backgrounds of this board and the talent that you bring to the table, so thank you very, very much.

And Nate, I'm really glad that you talked a bit about climate and climate smart agriculture. The first part of the NOP update here is going to be listening to a couple of folks from USDA talk about climate smart agriculture. So I can see a flurry of activity in the background.

We're trying to get the first speaker on, and so Sean Babington will be joining us, hopefully in just a second here. He is the -- a senior climate advisor for USDA and is in very, very high demand across the department, so we're giving him a couple of minutes to log in.
MR. BABINGTON: I'm here.

DR. TUCKER: Yeah. Okay. So let me give the formal introduction then for Sean, it's great to have you here. Sean is the USDA senior climate advisor. He works to help farmers and ranchers address the challenges they face as a result of climate change. He works across multiple mission areas within USDA, hence making him a very busy guy, to find solutions that help operations adapt, become more resilient, and mitigate problems.

Sean previously handled committee business pertaining to forestry, pesticides, and climate change for the US Senate Committee on Agriculture, Nutrition, and Forestry. He also served as a senior policy advisor for Energy and Natural Resources, and is an adjunct lecturer for Georgetown University's environmental studies program. So John -- or Sean, we're so grateful to have you here today. Welcome to the NOSB meeting.

MR. BABINGTON: Thanks, Jennifer.
It's really great to be here and I appreciate the -- the kind introduction and -- and the invitation to spend a few minutes with you all. So I was thinking, I'm just going to give sort of a handful of minutes on sort of how, from my perspective of the department, you know, USDA wide sort of approaching climate smart agriculture.

And, you know, with a little bit more attention paid to how organic systems fit into that, and, you know, maybe talk a little bit about some of our work going forward that we're carrying forward across mission areas. Obviously, many folks are familiar with our partnerships for climate smart commodities program, which I'll talk a little bit about. But also want to talk about some of our other work.

And then just sort of, you know, I'll close and note that there might be a little bit of a statement or some feedback that folks want to share with me. But more than anything, just thank you. Appreciate your collaboration. I see, just scrolling through really quickly, some
old friends here I spent a dozen plus years on the hill most recently, as Jennifer mentioned, working for Chairwoman Stabenow. And it's great to be back in touch with folks and have these opportunities.

So I think, you know, I'll start out sort of macro level, you know, broadly speaking, you all know this agriculture, forestry rural America are actually uniquely affected by a warming climate, and climate change, and the impacts that we're seeing. But also uniquely positioned to really be a meaningful part of the solution here to help on the mitigation side.

And with the right policies and incentives, us in the secretary's office and across USDA, I think we feel that climate smart agriculture, forestry sort of rural clean energy solutions that the department can help promote, can really create new -- both new revenue opportunities for producers, but also just strengthen rural communities that we're really thinking about all the time at the department here.

You know, one thing that the secretary
I think is particularly eloquent on, is, you know, it's not just an opportunity to think about additional revenue opportunities, but it's also an opportunity to think about sort of flipping the traditional energy and sort of climate discussion on its head a little bit. Right now, we see, you know, a lot of the resources, and the energy, and excitement, and the investment on the coasts and in urban centers.

And historically, we've seen natural resources, whether they be fossil fuels, or fiber, or whatever taken off the land, taken from rural areas, shipped to urban areas to see that value-add happen outside of those rural communities that the raw materials were derived from. And I think that this notion of how do we drive climate smart production, climate smart commodities, and the value-add that we can drive there, can help with some of that reinvestment in rural communities that we all care about so much.

So the department, you know, the Biden-Harris USDA under Secretary Vilsack's
leadership has really embarked upon an across the department effort on climate. We're thinking not just about traditional conservation programs and traditional farmer facing programs, but really everything that we do. We're looking at policies that are voluntary, flexible, led by producers.

As you all know, if the policies we're promoting don't work for producers, they're not going to work for the climate, right? We need to meet folks where they're at and think about this from grassroots bottom-up, rather than a top-down approach. And all along the way and everything we're doing in climate, we're thinking about scientific and rigorous monitoring, greenhouse gas accounting. Those are some of our north stars, right? We need to make sure that we're checking our math and that we're thinking about this in a very science based way.

And while we're doing that, we want to make sure that everyone has an opportunity to benefit here. We're not just talking about large row crops in the Midwest, right? We're talking
about small and medium size farmers, organic production systems, conventional, large and small specialty crops. And really the diversity not just of crops and regions that USDA serves, but the diversity of producers.

Underserved and folks that have -- historically USDA had not done a terribly good job of serving are a really meaningful part of how we think about climate. So we're really excited about all this. I've mentioned that we're not just thinking about, you know, our traditional conservation programs or just working through NRCS. We're thinking about our research agencies. We're thinking about international opportunities.

Some folks may know that the secretary launched the agricultural innovation mission for climate last year, and we have many partners across the globe who are really thinking about, how do we redouble that investment in agricultural research and innovation that can drive a lot of these practices that we want to see on the ground?
We joined something called the Global Methane Pledge, which is a really important part of all this climate work. Folks think about carbon as the only thing we're thinking about here. But when we talk about ag, we think about methane and nitrous oxide and there's a really important body work going on there.

As many of you know, the USDA is home to the Forest Service. We've got a robust body of work happening over with our friends at the Forest Service, some of you may have seen that the President Biden signed an executive order last Friday on Earth Day for -- pertaining to strengthening our forests, including looking at how we preserve our -- some of our most carbon-rich forest. Our old-growth and mature stands across our National Forest System, but also just across the country.

So there's a big body work going there.

And then we do get to our traditional conservation programs administered by NRCS and FSA, and thinking about how we can really orient and point those
towards climate smart outcomes in a way that is, again, based on existing relationships and existing body of work. And then what I alluded to earlier, the partnerships for climate smart commodities program.

As many folks know, and there's been a fair amount of interest in this, certainly a ton of interest and even a lot written about it, but the secretary in February, went to Lincoln University of Missouri in Jefferson City, Missouri and 1890s HBCU, and announced this $1 billion partnership for climate smart commodities program.

We are right now, accepting applications for this program. The first deadline is coming up at the end of next week, May 6.

And we're really looking to provide targeted grant funding to meet the national and global demand for climate smart commodities, and expanding the market for these commodities. We think that there is an important role for USDA to play in developing this new market. And while we're thinking about applications for this, we're
really looking at folks to show their math. I mentioned this a little earlier, but monitoring verification, reporting is going to be a very important part of it.

And it's a very flexible program, right? We've got a wide range of public and private entities, farm groups, states, non-profits, businesses, tribal governments, higher education institutions, right? Our land grant universities, all eligible to apply. And we -- really, I want to emphasize this, see organic producers being an important part of both this program and our broader climate work, and hope that you all see yourselves in this broader work.

There are so many great lessons and tools, you know, and so many people on this call and across the broader community. Just such leaders in sustainable agriculture, and cultivating those tools and that expertise that can really, really benefit us in this broader climate discussion that we're having right now.

So, you know, a few specifics and I know
you won't know this. I just want to say it out loud. Some of the things that organic does best that organics, you know, it's part of the program, right? Improving water quality and minimizing erosion; crop rotations and cover cropping to promote ecological balance and conserve biodiversity; a whole host of things that you all are such experts in on improving soil health, which in turn stores more carbon.

Those are all critical, critical knowledge bases and sets of practices for us as we think about the Department's work on climate and how to scale up some of this climate smart agriculture work across the country. So again, I just wanted to say one, thank you again for having me. We at the department feel that organic producers are a really critical part of this discussion, and really have such expertise we're really, frankly, going to need as we move forward on this.

So we're really looking forward to continuing to work with you-all. Our colleagues,
certainly at the National Organic Program, but the Board and others in this space. Learning from you-all and moving forward together on this really important climate discussion.

Jennifer, unless I missed anything, I think I'll wrap it up and just, again, say thank you. Again, great to see some friends on the screen here. If you're ever in the Whitten Building, please stop by, darken my door here, and I'll wrap it up and let you all continue with your meeting.

DR. TUCKER: Sean, thank you so much. We would like to give the board chair just an opportunity to say a couple of words back that the board is really engaged in, in the climate agriculture -- climate smart agriculture discussion. So, Nate, you want to take the mic for a couple of minutes here.

MR. POWELL-PALM: Sure. Sean, thank you so much for joining us today. This is really -- is a meaningful connection for us all to have this conversation in one spot. So really want to
say, thank you for your time. I was just so stoked when we saw the announcement for the $1 billion for climate smart commodities. One thing that I would -- I -- in reading the text, it sounds like the goal of the program is to ultimately identify those practices that are climate smart, but then help us foster a marketplace so that producers can ultimately realize a private market solution to making sure that they can get a premium for climate smart commodities.

As we roll through some of the more specifics that we're looking at at practices, like nitrogen usage that you mentioned, reducing NOx, and soil carbon sequestration. I think that there's been sort of an underselling of organics as far as what we can bring to the table, having already created this marketplace that rewards farmers for these practices.

So when we look at NOx, I know that there's a lot of precision agriculture trying to figure out how do we reduce it and use it, right? Organics doesn't use it at all. And so when we
think about how quickly we can make these strides,
looking to organic as a leader on nutrient
management, because we are only using those inputs
that are available on farm, or select inputs off
farm. In looking at tillage, oftentimes soil --
organic gets kind of a bum rap for tillage.

But when we look at the entire rotation,
oftentimes, organic is tilling less than
conventional, because we usually have a perennial
phase in the rotation, where we're able to realize
several years without any steel in the ground.
Manure management, we have inspectors on the ground
monitoring for manure voluntarily from producers
opting to be certified organic.

So I think the biggest thing that we're
wondering about and hoping to engage on is how do
we have USDA recognized organic as a climate smart
practice. That seal being married right away to
that claim that companies who are looking to invest
in ESG and companies trying to figure out where
do I put my climate smart supply chain efforts,
my investment dollars.
I think we're at sort of shaky spot right now because a lot of practices that are inherent to organic are being elevated, celebrated as a cover crops, NOx reduction. But all of that is already existing in organics, and we already have a marketplace. So we need to put some numbers behind organics. I realize that, and that's definitely the goal of engaging in the $1 billion for climate smart solutions.

But on a broader base, I was wondering if you had any input on how we could better message that we've got five percent of the food market already signed up, ready to go in this marketplace that has all the infrastructure built. We have consumer confidence, we have a regulatory system, we have deep public investments, and it seems like it's a right fit for what this Climate Smart Commodities Program is looking to do.

So is there a way we can see organic as a fire to which we need to just add gas to try to get it bigger and bigger. And I realize with climate change, we do not have any time for us
versus them. This is not organic versus conventional. It's just hoping that we might be we'll say, here's one example of everything being done right. And if you-all want to copy, that's great. If we want to add, you know, the confidence that USDA acknowledging organic as climate smart solution would really help companies invest and grow this market that we know has pretty solid legs.

MR. BABINGTON: Yeah, thanks, Nate. And I really, one, just appreciate the perspective and sort of the candor, but also the constructive approach that you just took in all of that. I think it isn't us versus them, right? It's too important of an issue, and it's too urgent to say it's not organic or conventional. It's not big mess -- Midwestern row crops versus specialty crops in California. It's got to be all of us, and we got to move forward together on this stuff.

I do think to your point about, you know, how can we kind of, you know, elevate the discussions surrounding the good stewards that organic have been for a long time and what they
bring to this climate discussion. This type of
dialogue, this kind of meeting, I know there was
a -- an exchange between the program, National
Organic Program and the Standards Board month
before last about kind of, you know, some of those
synergies that we can just talk more about, because
there is such a great story to tell here.

And I think that, you know, you have
my commitment certainly to continue to engage with
you all to to tell that story. The specific
question about sort of how do we match up seals
and certifications and stuff. That one's a little
bit funny, right? And we need to get into that
and figure that out. And we've got process
verified and all sorts of other things, but we're
committed to having it, and this is just such a
group of leaders, you know, really in this kind
of sustainable agriculture that, you know, was
started before we were thinking necessarily about
climate but there's dovetail so well with this
exact discussion.

So I think, you know, I would love to
just keep the dialogue going, and look forward to
hopefully seeing a lot of participation in the
partnerships program. As I mentioned, the first
big deadline is next week. But, you know, when
we think about that program, we are hoping to learn
so much about what's out there, who can show their
math, who's got, you know, the MMRV -- measurement,
monitoring, reporting, verification -- behind
their proposals, and then allow us to learn an awful
lot about that as we take our next steps.

As the department working with Congress
on the 2023 Farm Bill, et cetera, this will be the
first one since 2014 that I'm not on the hill for,
and I look forward to not being there for those
really late nights. But I'm a little sad to miss
out on what is a really exciting process, I think,
for all of agriculture. So anyway, I really
appreciate the sentiments. I appreciate the
opportunity with you-all, and certainly to have
a constructive dialogue going forward.

MR. POWELL-PALM: Thank you. We
cannot thank you enough for your time, and really
appreciate you coming today.

DR. TUCKER: Thank you, Sean, very, very, very much. Let's give another round of applause. Really appreciate your time and being here. Thank you. Thank you. Thank you for all that you're doing, and for being with us today.

So thank you.

MR. BABINGTON: All right. Great to see you-all. Enjoy the rest of the meeting.

DR. TUCKER: Okay. Be well. I'm now going to turn it over to our second USDA climate speaker. This is Adam Chambers. So Adam, I see you are on with us. Thank you. So Adam is with NRCS, Natural Resources Conservation Service. He is the scientific lead for environmental markets. And so we've had some great conversation leading into this meeting.

His team focuses on leveraging markets that value ecosystem services, building strategic partnerships and getting more conservation on the ground. And so his work is supported by NRCS Farm Bill programs, and works to increase voluntary
conservation practices on working agricultural lands in the United States.

And so Dr. Chambers' project work has focused on the applied sciences, reducing air pollutants and greenhouse gases, and providing a merging carbon market opportunities for US land owners and agricultural producers. And so Adam, thank you so, so much for being here, taking the time to be with us. And we turn the floor to you.

DR. CHAMBERS: Hey, thank you, everyone. I look forward to the day that we're all in the same room again. I just cannot wait. Thank you, Dr. Tucker. And thank you, Mr. Babington, for giving the great introduction. I'll try to take us maybe a step on down the quantification path. And made -- I'll try to touch a little bit on that challenging quantification piece that you touched on with nitrous oxide as well. That's always -- that can always be quite, quite challenging.

I was going to just try to share my screen and go through a quick few slides so that
we can all kind of work off of a common denominator
if you might. And it's relevant -- so rather than
you having to see me, we can show some slides.
So I think you can see slides maybe if I can get
a thumbs up from somebody or -- there we go, one
more step to go.

So yeah, I'm Adam Chambers. I work for
NRCS, and I've worked for NRCS for quite a while.
I work on conservation practices. So voluntary
conservation practices, delivering greenhouse gas
mitigation benefits, as kind of what Nate talked
about, and carbon sequestration benefits. Now,
what I want to do is talk about the -- everything
that Nate touched on, which is Adam Chambers works
in the -- yes, I agree with you wholeheartedly,
now, let's put the quantification to work and prove
that in the numbers.

And then can we put the numbers forward
that justify our scientific assertions that we
make, or the -- the -- the, you know, kind of the
hunch. I mean, I really trust in humanity and our
intuition, but I also like to work with numbers
and see the quantification. So as we all know --
and I think this was really highlighted with Mr.
Babington’s overview, and Dr. Tucker as well.
We are the first generation to fully understand
this problem of climate change, and we're the last
with the ability to solve it.

These aren't my words. I'm borrowing
them from other climate scientists, but this --
we got to be all in it. We -- all in it, all
together, right? And this is our opportunity for
the folks who were -- who are inhabiting the top
of the earth. At this time, we understand it.
We understand how to solve for it. And now we got
to get to work.

We know that working lands agriculture
can deliver. We know that forestry can deliver.

We know that industry can deliver. We know that
every sector has to be involved, and as Mr.
Babington mentioned, it's a full sector
prioritization. And we're trying to reduce the
carbon footprint across all sectors through -- and
in NRCS, we have voluntary, real, quantifiable,
atmospheric benefits that -- these are called climate solutions.

But then in parallel, we have to produce the food, the fiber, and the fuel that we need for the world. So I hope that you all will see yourselves in all the slides here. And I really want to kind of put an exclamation point on that, because it's inclusive. This is an everybody on board. We also know -- here's another climate change overview. If you look at the left, we've got carbon sequestration and greenhouse gas mitigation. If we can increase this now, we can reduce the cost of adaptation and resilience in the future.

We also know, if we don't make investments now, as we talked about these challenging gases, they live in the atmosphere for decades. In the case of methane, for centuries. In the case of CO2, for almost millennia. And when we start talking about some of the more potent greenhouse gases, and those will be around for a long time. So that means we have more investment
in the future in our resilience adaptation.

So anything we can do to keep the gases out of the atmosphere, or work with that carbon cycle and bring them back to the atmosphere. Now, again, bringing you into this picture, we have a whole -- this is from a peer over on the comment team at Colorado State, Amy Swan, and it was also published in the Intergovernmental Panel on Climate Change 2006. We know there are lots of sources and lots of sinks on all operations.

And so then the question is: Can we track all of these different gases and look at how did they quantify, and then how do they stuck up, right? Are there net benefits to the atmosphere? Or are there net losses to the atmosphere? We know that just about everything in production causes emissions. But we also know that we can work with the nitrogen and carbon cycles to bring things back into the planet.

So we've got three main greenhouse gases, this -- if there was a quiz today, it would be carbon dioxide, nitrous oxide, which is also
laughing gas, and it's a persistent gas that stays in the atmosphere, and methane, CH4, which does decay over time to become carbon dioxide. But that's the end of the chemistry for today. Let's just kind of have fun and talk about being part of the climate solution.

But there are a lot of sources, a lot of sinks within any agricultural operation, including organic operations, and there are numerous intervention opportunities. We all know that -- if we can make the intervention opportunities, some of them are technology driven, some of them are practiced and management-driven, and some things we just cannot change for the time being.

At NRCS, we work with systems, and this is an extreme egregious case, but we work with systems like this. I see an atmospheric problem, I see a water quality problem, I see a soil problem, soil health. But we try to transition those systems into more sustainable, more operational systems. And we know, of course, within soil
health, with soil organic matter, we can build carbon stocks, and we can protect our most valuable resource, which is topsoil, right?

We all agree on that. We've got livestock operations -- same thing, egregious, but we know we can go to livestock health, soil health, sustainability, have a bunch of co-benefits associated with all these climate benefits. And then my third and final picture on kind of what we do at NRCS, we take systems that may have extremely, you know, large amounts of erosion, which we all agree is a bad thing, and then we can restore that.

We can take a land and put it in a different use and deliver photosynthetic activity, improve the whole systematic approach, enhance carbon sequestration, reduce emissions, reduce soil loss, improve water quality. The cascade goes on and on it. I'm a climate scientist by training. So I've always just worked in the atmosphere, so I kind of look at the world through the glasses of a scientist with an atmospheric
lens.

But I want you to all see yourselves in all of these slides. And I hope, you know, I trust that most of you are well beyond all of these practices, and kind of into that extremely advanced level of delivery. Here's a slide that I borrowed from Bill Hohenstein recently, and the USDA climate priorities on the left. I'd like to draw your attention to a couple of these that I'm going to focus on for the remainder of my time today. And then some of the principles to the right that are also important.

So as Mr. Babington mentioned, we've got climate smart agriculture. We want to leverage existing programs, but we want to build these partnerships and learn more about how we can deliver these greener commodities to the marketplace. We've got climate smart forestry quantification methods. Then we have adaptation and resilience, which what we talked about. We want our workforce at USDA to be climate informed. We have to move out in research and development,
right?

We can only move the quantification tools as far forward as the research is behind an underpinning that. We've got energy efficiency, renewable energy. We have equity and environmental justice, and then we have international cooperation. So we're trying to do all of these things. And at USDA, we're learning along the way, right? We're trying to get all these pieces together and move people forward. We may move faster in one place, but then we try to back up and pull another topic forward.

We want to be comprehensive over to the right, voluntary and incentive based, that's what I just talked about from NRCS, equitable and accessible, we want it to be cost effective, we want public engagement, and we want rural economies, as Mr. Babington definitely emphasized.

So the ones that I'm going to speak on for the rest of my limited time today are really existing programs, the quantification metrics, and the voluntary incentive based equitable, accessible
programs.

And again, please see yourself squarely within this. And the opportunities exist for you all to be part of these partnerships. We want to move that forward. On the left, we've got a 600 page document. Many of you are familiar with it. I see a lot of friendly faces on the -- in the group. I always refer to that as the methods report. That's how we do our quantification.

So as Nate mentioned, how do we quantify the N2O emissions to the atmosphere, or how do we quantify the emissions from a tractor? How do we do all of this? And so this is our book. And, and we republish this every five years as the state of science improves. And then we have a handful of quantification tools over on the right, which we try to build to be inclusive, but also scientifically based, which is a very difficult balance to keep going.

At NRCS, you may have seen that we have a list of atmospheric beneficial conservation practices. Again, these are NRCS conservation
practices, but we hope that some people will have
adopted many of these in the past. Some people
may need help adopting some of them. So I hope
that you can see yourself there. And we'll pick
on 590 right in the middle of the screen, nitrogen
management, right? If we can have a nutrient
management plan, we can have a nutrient management
plan in a conventional context.

But we also need to have a nutrient
management plan in an organic operation, because
as Nate mentioned, there are great opportunities
to reduce N2O emissions, but there's also the
potential, if you don't manage that nitrogen
properly, to cause that to go to the atmosphere.

So we just need to manage, you know, balancing
for nitrogen, balancing for carbon, compost manure
applications. Those all can be great
opportunities to reduce emissions.

But applied in a system that gets water
at the right time, and too much of one of those,
you can have nitrous oxide emissions. So we've
got this list of practices that really can underpin
a lot of the initial work on the partnership, but
-- with the partnership program. But we want that
partnership program to expand our breadth and how
we understand what's going on in the country, and
then how these things are getting monetized in the
marketplace. As you all know how to monetize
extremely well, as it has been discussed.

We take -- I took all of these and just
put them in a little different format. You can
see I've got cover crops, and this is going to be
for the benefit of my next slide. My next slide
is just going to show you -- so this is all the
NRCS conservation practices. We have about 33
practices, and then a handful of enhancements.
Another 80 or so that make up our climate smart
list as of today, but we plan to expand that list
next year and improve it.

But if you take this matrix writ large,
you'll notice that, you know, I focus on cover crops
just to draw your attention to it. But the pieces
I really wanted to show you is right here, and this
is NRCS' quantification work. So we quantify the
atmospheric benefits over time. And those little boxes, that matrix of 33 practices, delivers how many benefits -- carbon sequestration, greenhouse gas emission reductions -- we've had over time.

And you can see that, you know, in the hypothetical blue curve, that's the NRCS curve. That's only what we delivered through Farm Bill programs like Mr. Babington mentioned. Then there's how we mobilize the larger marketplace. And that's our opportunity, because we know the red line is the larger marketplace, the national curve. And if we can help influence the national curve, we can lift that, and we can get more atmospheric benefits through these market driven mechanisms.

So that's just a little bit of thinking on the opportunity, as I mentioned NRCS, we track and try to quantify the benefits of everything that we deliver under the Farm Bill programs that were generously granted through Congress. But we know that's only a fraction of what we can actually deliver into the whole, you know, to the planet,
actually. And we also keep track of that national curve in the national greenhouse gas inventory.

And the national greenhouse gas inventory quantification methods, we tried to keep those consistent all the way back to the blue book, which is a challenge in itself. So then, at the end of the day, NRCS does an annual quantification.

We quantify our soil health practices, and that's inclusive of organic. So please think of yourself being nested in the soil health practices.

The perennial biomass and agro forestry is the green. You've got livestock operations, livestock that includes grass-fed, and confined animal operations. But we put that all together in how many benefits can we bring forward for the ecosystem from NRCS Farm Bill programs. And those are -- those have to be delivered in a year.

So we have two different processes. If you know NRCS well, we do a lot of planning. But I don't get -- I don't take credit for those in our quantification, until they generate photosynthetic activity, reduce that methane --
important methane emissions, or stop that nitrous oxide emissions to the atmosphere. And then you can just do a simple and a comparison. I think last year we had about 82.3 million metric tons of CO2 equivalent reductions just from NRCS.

And that delivered almost 18 million, you know, offset. I don't say it removed the cars -- cars still stayed on the road. So it offset the emissions of 18 million passenger vehicles, and these other metrics for which we reply -- or rely on on EPA to help us do the inner comparison.

But at NRCS, we take this quantification very serious. We hope that we could work with the organic groups to deliver on the quantification.

Some folks in the Board, I even heard from in the past on hey, I need a crop put into the tools. How do I do that? What about I think I remember hearing it was Logan that talked about -- or no. Maybe Logan was on carrots and then there were green field peas and another topic. And we've definitely heard from both of them as Nate. And we've heard from those not being in comment.
The hardest part of that is we're trying to get the quantification into the blue book. So into that blue book, so that then we can put it into the quantification tool. So we need the science and really that's driven by that scientific research agenda, which I think, leadership has recognized the opportunity to improve that, and that's where the climate smart commodities program really comes in, and will help us advance science forward.

In addition to our great work with ARS, ag research service. So I'm running about out of time and I've got just a few overarching conclusions here. I want you all to just kind of take away, and I'm happy to to help in the future. We know that voluntary working on this conservation delivers on the climate solutions. We definitely are getting more conservation on the ground, but we need to get even more conservation on the ground.

As Dr. Tucker said, you know, I try to tell people I'm trying to get conservation on the
ground. But the other thing that's important is -- and you all know this probably better than anybody -- is when you invest in a system and you build soil organic matter, or you plant a fruit tree as we had discussed in the introductions. We know that accrues carbon a little bit in year one, year two, year three, and then we all know the look of the tree rings as they get bigger, so that accrues more carbon.

So the important -- the other really important thing here, and you all know this well, is we got to keep the conservation on the ground. Because carbon often begets carbon in these natural systems, and the system likes to move in that direction. And then finally, with mitigation benefits are tracked by NRCS, we try to have consistency in our quantification methods all the way from the national inventory approach, down to our field level or our farm level quantification tools.

So in my wrap-up, I'm going to go back to my first slide, which is, and I do feel
profoundly, you know, indebted to future generations here. We understand this problem. We do have the ability to solve it. One of my recent peers asked me, Knowing what you do about climate change and spending all this time on climate change, how do you sleep at night?

And so I thought about that for a while, and I responded to her with an adjustment to this quote, which is, we are the first generation to fully understand the problem, and we're actually the first generation with the tools to solve it.

So with that, I think that's our opportunity, is we get to go from being the last with the ability, to being the first, the first with the tools to deliver on it. And I would say, honestly, you all are well ahead of the game, and we have a lot to learn from you.

But I'm also a scientist, so there's kind of that -- let's do the quantification to support our assertions. And then we have a really compelling story to tell. And I guess that ties into Mr. Babington's opening remarks on the
partnership program of how -- trying to get people
to show their math and definitely help us expand
and improve our mathematics as well on the
atmospheric benefits. So with that, I really
appreciate the time and the opportunity to speak
with you-all. And I look forward to our continuing
discussions.

DR. TUCKER: Adam, thank you so, so
much. Genuinely appreciate your being here, your
energy, your enthusiasm, and all your thoughts
today. So thank you, thank you, thank you. Nate,
did you want to make any quick follow-up on that?

MR. POWELL-PALM: I don't think it's
lost on anyone on this call how grateful we are
for the work of NRCS, and how I think it's an example
of really smart scientists helping farmers do their
best. So I really wanted to thank you for your
work, and everyone at NRCS.

DR. TUCKER: Well put. Again, thank
you so much.

DR. CHAMBERS: Thank you. Thanks for
having me. I really appreciate it.
DR. TUCKER: We were thrilled to have you here, so thank you for being -- and we continue to -- we look forward to continuing to work with NRCS. I think we have a lot of joint interest and joint projects to move forward here. So look forward to doing that. And so in the meantime, I think you can stop sharing, otherwise, I don't know how to override your share. You're sharing your dog -- somebody in Zoom is better than I. Okay. And thank you again, Adam.

You're welcome to stay on. If you would like that, though we assume you also have a very busy day. I'm going to give a couple of follow-up comments to what we just heard, and then we'll move into the NOP update. And so again, glad we were able to bring those speakers in. I wanted to kind of, I did -- I didn't know what those folks were going to say before they came, so I was hearing it with you.

And as I was jotting down the notes, the word that just keeps on coming back in all elements of this climate discussion is data. So
the importance of data, to continue to support the science, to demonstrate organic's role, and to maximize farmer access to climate smart programs and benefits. So how do we continue to generate data in a usable form to demonstrate and continue to verify, validate, and confirm the role of organic and all of these different -- through all the different practices that organic is already doing.

And so I think most -- a lot of folks know at this point that as a child of a computer scientist, I do tend to think often in terms of data, and data exchange, and data harmonization. And so, getting more data to support both the practical science of this, but also the research side of it. Getting more data is supported by data harmonization that facilitates data exchange.

And so when I listen to talks like that, I think about all the data that is entering into conservation plans to demonstrate for NRCS through their conservation programs. But I also think about all the practice data that is currently being
lost because of a lack of harmonization and data exchange for organic system plans. Yeah, I looked at the slide that was shown on conservation practices, and yeah, that stuff is all in organic system plant, but it is sitting in PDF forms or in disparate systems.

And then somebody got to take it, and we've got an analyst here who calls it swivel chair interface. So I enter in this computer, and then I swivel over my chair and I enter it into this other computer. And really thinking strategically about how we can think about dated differently. The public-private partnership leads to a huge decentralization of practice-based data that could really help with this climate conversation.

And so I really encourage all of us to think about how we can think about data and data harmonization and data flow differently, when we think about things like organic system plans, and other tools that track and report on these climate practices. So some of that's on USDA in terms of
figuring out how do we make our systems talk to each other, even though our systems are designed to do different things.

But how could certifiers also kind of work together for a more harmonized approach to data management with organic system plans. And so I encourage all of us to think about how we can kind of collectively and continuously improve in that data space. So some of the thoughts that came out of listening to our guest speakers today. I did want to answer a question that came up in the chat in terms of NOP's engagement.

We have been engaged with a team that is working on these climate initiatives that you have meeting agency-level meetings, that I have attended, that Erin Healy attended. We have those -- have staff members attend. We also will have or we have offered proposal evaluators for the climate smart commodities program, so we will have organic expertise involved in reviewing those applications as well.

So we are engaged in -- in the -- in
those conversations within USDA. We have provided a variety of information about the standards and what they mean and what those practices are. Having an undersecretary who is an organic producer really helps in that conversation as well, because she understands the language of how to talk about organic across the department. I think that's a very important asset.

So I got to take a deep breath and close this part of the NOP update. I'm also going to pause for a second and drink a glass of water and breathe a little bit, so I'm going to actually encourage we -- do this to certify our training. Let's all take a few breaths. Everybody take five breaths, cleansing breaths in and out, while I breathe and drink some water and then I will be back. Five breaths. Doesn't that feel great? Okay.

We're now going to move to the next part of the NOP update, and it is actually a celebration. I'm going to bring up a couple of slides here. We are celebrating our organic certifiers today.
And so, I wanted to take a few minutes to recognize a big anniversary for the program that happens this week.

Congress created the National Organic Program as a public-private partnership. The system could not work without certifiers and their team. So this Thursday, in fact, marks 20 day -- 20 years since the day that USDA accredited its first class of organic certifiers under the Organic Foods Production Act. And so I will move to the next slide that shows their logos.

So this is the first class of certifiers, the certifiers who have been around since the very, very beginning. And so after so much work by thousands of people across the organic community 20 years ago, the federal standard could officially be used to certify organic farms and businesses. And so this milestone really does help us remember the unique role that certifiers and their staff and inspectors serve in their ongoing work to deliver consistent oversight and continuous improvement.
And so an awful lot has changed since 2002. I believe we have collectively worked together to develop and further implement the organic standards. So these certifiers have conducted thousands of inspections over two decades. They have filled strong organic control systems that are protecting organic integrity around the world.

Hand in hand with them, NOP has built the first public database of organic operations. The organic integrity database has now been in place for about seven or eight years. So it's part of that history, as is now our learning center. And so we continue to build the infrastructure and the systems that ultimately are exercised by organic certifiers and by organic farms around the world.

So today, there are 76 certifiers, and their work continues to be vital to the community. They in turn work with organic farmers who are using all these natural materials, and who are taking a systems approach to protect natural
resources, to build soil and water quality and biodiversity. And they are vital partners in consistent oversight, engaging in continuous improvement across a myriad of control system activities.

So we have sent the very first class of certifiers a keepsake. I'm going to put it in the camera here. See if folks can see that, it's the number 20. And so it's a 20, and on the front, it says celebrating 20 years of USDA organic certification. It has the the seal on it. And so to -- we've sent them this to mark the milestone in their own offices. Over the next several days, USDA, the Department will be posting about this anniversary across our social media channels.

And I believe we're going to be sharing in the chat some of those links. So if you would like to help us sort of celebrate this -- a rather momentous anniversary. We hope that you will watch for and share those posts. And so, I want to give -- I know we have a lot of certifiers on the line with us today, so I'd like to pause and
give them all a big round of applause for everything that they have done. The first class of certifiers and every certifier that has followed in their footsteps. Okay.

We are going to turn to some key program updates, and a review of feedback from the recent regulatory priorities, public comment opportunity. So we're going to take this in two segments. The first -- I'm going to give you an update of where we are with some key rule making and then we're going to turn to reflections on the regulatory priorities notice.

So first, there is a full NOP update that was recorded by many different people across NOP. It is posted in the organic integrity learning center. It was included in an insider that went out last week. If you go to the learning center, you click on NOP presentations. There's presentation in there that is the full NOP update. And so it's about 40 minutes, gives an update on priorities and recent successes. So I'm not repeating all that here, but I am going to review
where we are with some key rules.

So the first one is organic origin of livestock, final rule. And so there was a lot of communication about this, as well as a recent webinar. That final rule was published on April 5th, we are now in a one-year implementation period. We will be launching training for certifiers and operations in the learning center later this year, as operations gear up for that change.

The organic livestock and poultry standards proposed rule went to the Office of Management and Budget, OMB, in December, and we have been working closely with OMB on their review process. The strengthening organic enforcement final rule is in legal review. Now that, for folks who track the clearance process, a legal review is an early step in USDA clearance.

So it means we finished the role, NOP has been pencils down on this. It is now with the legal team. Another important role is the inerts role. So this is looking at what we're going to
do about list three and four on the national list. That is an advanced notice of proposed rule making where we will invite public comments. That's also in legal review. So the lawyers have that advanced notice of proposed rule making in review.

We also continued to work on other national list rules on an ongoing basis, and we generally have two to three rules or notices related to the national list underway at any given time. So I know there's a lot of emphasis on practice standards, but I do want to pause and really acknowledge the strong and steady work of the national list team, that we have really got into a very stable, and by rule making standards, pretty rapid cadence of rule making related to national list.

Rule making does take time. The national list process shows how that can work as efficiently as rule making possibly can. So this brings me to an important update on the fall 2021 NOSB recommendation to prohibit ammonia extracts.

And so USDA has decided that we will proceed with
the rule making process.

So we will proceed with the rule making process to propose adding ammonia extracts as a prohibited natural in crop production on the national list. And we have decided to move ahead with that rule making process independently of the Board's current work on highly soluble nitrogen fertilizers. So we are pursuing the rule-making on that fall recommendation without -- we understand you're not -- we haven't voted yet, on that highly soluble nitrogen fertilizer proposal.

But we are committed to moving ahead with the rule-making process on ammonia extract.

So that's our update on that recommendation. I know there's been a lot of interest in that across the community. So that's a summary of where we are with key rules at this time. So I'm going to turn to now discussing the recent priority -- regulatory priorities, public comment opportunity. And you know, before I switch over to that, just because now I've been talking for a little bit, I am going to take a little
bit of a break here and see if there are questions
on what I just said. So I know we'll have other
questions, but let's see if there are questions
on what I just talked about in terms of rule making
priorities before we move to the regulatory
priorities discussion.

MR. POWELL-PALM: Who has questions
for Jenny? All right, Amy, please go ahead.

MS. BRUCH: I --

MR. POWELL-PALM: Sorry. Let's see if
Jenny's ready. Okay.

MS. BRUCH: Okay. Thank you, Nate.
Thank you, Jenny, for those really important
updates. I know you mentioned about the
Strengthening of Enforcement Act still being in
legal review. This is an incredible rule
important to the community, and I just wanted to
ask if there was anything more that we on NOSB or
the community can do to impress upon the USDA the
importance of this rule in advancing it through
rule making?

DR. TUCKER: I appreciate that
question. You know, I often talk about sort of the rule-making pipeline in terms of things moving through different stages. It's called clearance to get all the way through that process. There was a tremendous coordinated push from the community, on origin of livestock. And that is I believe a real -- it was a -- it was very important to origin of livestock getting completed.

Knowing how united the organic community was around completing origin of livestock and how important it was to get that rule finalized and out in the world. The consensus and clear communication from the community on that priority was vital. And it -- it did -- it put origin of livestock at the front of the line for rule-making.

And so for folks who believe SOE, and I'm one of you, believe SOE is as important, it will actually impact more people than origin of livestock in terms of implementation. Your voice works, your consensus, connection, collaboration, communication, all those good C words are very
important in advancing rules.

MS. BRUCH: Thank you, Jenny.

MR. POWELL-PALM: Any other questions for Jenny? I just want to thank you for those updates, Jenny, before we move on. And I think that there's growing inertia, I think when we have really great collaboration on the Board, and the program hears our requests, and takes our work deeply into consideration. So we really appreciate that that's being done. Thank you.

DR. TUCKER: We got a great standards team here. We really have built that team over the past couple of years here, and they've really refined their practices. A lot of them have grown -- climbed a pretty big learning curve, honestly. Some joined from outside the organic community and have really dived in whole -- wholehearted to learn about the rule making process, so --

Okay, let's turn to the regulatory priorities. I'm going to give an overview of kind of what we learned through that process. So I'm going to start with some general themes, and it's
sort of overview. For folks who may not have been as familiar with this, we advertised a listening session, and then within that federal register notice, there was a summary of current outstanding NOSB recommendations, and an invitation for both participation and a public comment session, orally.

We had a webinar and written comments. And so I'm going to give kind of a top-line summary, for those who have not sat down and list -- and read all 572 written public comments. I'm giving you the executive summary, so you don't have to go read all 572 of them, which is an addition to the folks who actually -- who came to the public comment opportunity. So first a big thank you.

You know, 572 organizations and people who chose to participate in this process and have your voice be heard, is really impressive. And so thank you for taking all the time and thoughtfulness that you did to participate in that process. Big-picture take home messages, commenters generally supported NOSB
recommendations and urged NOP to address them by developing standards primarily through rule making.

Commenters noted that regularly updated standards will help protect the environment, protect the organic label, ensure a level playing field, and match the evolving consumer and industry needs. And so many, many commenters said that all topics should be prioritized, and all topics should be completed.

However, within that broader context of wanting all activities to move forward, there were three that ended up being the most often discussed in the comments.

The first is hydroponics and containers, the second organic seeds, and the third, native ecosystems. And so those three were referenced many times, with some differences in prioritization based on perceived difficulties in rule making. So I'm going to give some more details in a second, but I want to highlight those as the three top topics referenced in response.
In addition to those, many commenters voiced appreciation for NOP's current rule making on recent or in-progress rules. So the ones that we just covered, the strength in the organic enforcement, origin of livestock, organic livestock, and poultry standards, and inerts. Many comments supported their finalization and implementation. Some comments -- commenters expressed frustration that NOSB recommendations have not been implemented through rule making.

However, many commenters also appreciated the outreach to the industry through the Federal Register notice and encouraged an ongoing process of prioritization reporting. So now I'm going to get into the topic specific area, and I'm going to actually start with native ecosystems. And so many commenters discussed this topic. Many ranked it as a high priority issue, and asked NOP to implement rule making for the topic.

Several commenters, however, ranked it as a lower priority issue, citing the complexity
of the issue, the lack of statutory authority, and the possible need for legislation before NOP can break in rule making. So commenters in support of rule making stated that current standards incentivize the conversion of native ecosystems, because it circumvents the three-year transition period for farmland. And they cited the importance of biodiversity, consistency with USDA policy goals, consumer trust, and fairness.

Some commenters also referenced international prohibitions or restrictions on the conversion of native ecosystems. And so this is one where we truly do understand the importance of this issue to the community. And I'm also realistic about the challenges that many did note in public comments.

The federal register notice on regulatory priorities had noted that before proceeding with this recommendations, we'd like to see significant support by the organic industry, and noted that congressional action may be needed. And so based on the comments received, those
comments still apply.

Let's move on to hydroponics and container growing. This topic is a high priority for many stakeholders. The consumers -- the commenters noted that inconsistent certification and enforcement is causing confusion amongst certifier and producer communities. The primary concern of commenters was whether hydroponic and container systems and operations can meet up the soil fertility requirements. With some commenters suggesting a hydroponically grown, or container-grown, or organic label, or a separate specialty crop standard.

And so we do acknowledge the significant interest in this topic. There is a current lawsuit on hydroponics, and it is in the appeals phase. The resolution of that case is likely to inform next steps and direction on this topic. We have stated publicly several times in the past that right now we don't have sufficient information to move directly to a proposed rule on this topic. And so we know that many in the
community do have an interest in the board taking this topic back up. So that's hydroponics and containers.

Next, is organic seeds. And so this topic was ranked medium high by many commenters, with most commenters supporting increasing the use of organic seed. Some commenters did say that the current regulations are adequate, and that mandating use of organic seed would unnecessarily burden farmers. They asked that the commercial availability exemptions remain in place.

Commenters stated that research on organic seed has stagnated, and cited the importance of continuous improvement benchmarks to help drive innovation and increase the use of organic seeds. So a couple of comments on this one. NOP -- we are aware of concerns about the low use of organic seed. We noted in the federal register that we had not made this recommendation a regulatory priority because we believed that the recommendation is already addressed by USDA regulations for commercial availability.
Because we did have some concerns about how the provisions were being implemented, we did invest in developing training on organic seed sourcing as a practical, high impact step. And that training is available in the Organic Integrity Learning Center. And so the public comment process, as well as the new organic seed survey that the Organic Seed Alliance will be discussing during this meeting this week, have really provided very, very useful feedback and historical background that will be helpful in re-evaluating this priority moving forward.

I shared in another setting that I -- if I had placed a bet on what the highest priorities were going to be, this wasn't on my list, and now it is. So I think the public comment process really does work because it was very helpful to read through the public comments on this particular topic. One of my common questions when people say we need new standards is: Well, do we really need new standards, or do we need to be better enforcing the standards that we have? And sometimes the
answer's both/and. And so I appreciate the feedback on this topic.

The next set of topics of relate to rules, where a rule-making process had begun under Secretary Vilsack's first term. And so I'm going to now run through those with some feedback from public comment. Mushrooms, most comments did support developing mushroom standards and ranked this issue as a medium priority. Many commenters felt that we should advance all NOSB recommendations, and this is one of those.

And some comments noted that existing crop standards are not appropriate for mushroom production, such as compost requirements. For pet food, comments again, generally supported the standard thinking all recommendation should move forward, but did rank it as a lower priority.

Apiculture, commenters again, generally supported the topic ranking it as a slightly lower priority. One certifier did rank it as their second highest priority. And then aquaculture, most comments did support developing
the standard, but generally ranked it as a low or medium priority. Our commenters did note the need for consistency and the unfair advantage for -- that foreign aquaculture producers currently have versus domestic producers. And there were some specific comments about including algae and spirulina production in those standards.

So those are practice standards that had been initiated under the previous Vilsack administration. Okay. Now I'm going to turn to a set of comments on other topics. And I'm going generally in order of the number of comments, particularly an individualized comments that came in.

Genetic engineering and excluded methods. Most commenters rank this as a medium-high priority, except for one certifier or who noted that certifiers already enforce this consistently. Some comments claimed that a better definition of excluded methods would increase consumer competitive -- competence, but others claimed that prohibiting technology may cause --
may increase confusion and stifle innovation.

For handbook updates, commenters rank this as a medium high priority, asked that NOP to regularly update the handbook, especially after rule-making. Others pushed for more educational resources, and others said that learning center courses should not substitute for written standards. There were a mix of comments on the handbook, and this came out in the verbal comments as well, about how questions about how well they could be enforced compared to the actual standards.

Emergency synthetic parasiticides. There were only a few comments on this topic. They ranked it as medium-high priority, except for the accredited certifiers association, which did not believe standards development was needed on this topic. Several commenters asked NOP to better define emergency. So not a lot of comments on that, but the ones who did comment focused on that term.

Commercial availability with processed products, commenters generally ranked it as a
medium-low priority, noting that rule making is not as high priority, because ACA has already issued best practices on the subject, which has been supporting certifiers. Livestock vaccines using excluded methods, many rank that as a lower priority, citing verification challenges, a lack of market impetus to develop organic appropriate vaccines, the unavailability of alternative, and animal welfare impact.

And then finally, personal care products. There were a few comments on this, but not many, and only one ranked that as a high priority. And so most commenters noted the jurisdictional complexity of that particular topic. There were other comments. So it came in through this process on, for example, challenges of climate change for organic farmers, communicating organic is climate smart agriculture.

Comments related to the structural and procedural changes to the NOP and NOSB, I'm going to talk about that more in a second. Organic
research and research funding, increased budget capacity for standards development. And we have stepped up in standards. And then there were some comments on high nitrogen fertilizer.

I did want to comment on the staffing of standards. We do have quite a robust team, there are a couple of public documents who -- that reference that NOP only has, like, three or four people working on rules. And I'm not quite sure where that number came from, we have a lot of folks who are working on -- on rule making activities with -- within NOP, and really have built up that team over the past year and a half or so. So okay.

Final sort of comments on some items that were actually not listed in our federal register notice, but did receive some comments. Some link to that structure on procedures changes category, and named those comments as priority. So I actually wanted to use two of those as kind of case studies that illustrate what I call sort of the civics of NOP, and how different policy topics play out, depending on how they get raised
and how they get resolved.

And so one of the topics that comes up sometimes with respect to procedural changes relates to the sunset process. And so I did want to touch on that a little bit, because I think the story of the sunset process helps illustrate how these processes can play out. And so many years ago, USDA changed how the board votes on sunset reviews using a federal register notice.

So there's a federal register notice that formally changed how sunsets are considered. That notice was subsequently contested in a lawsuit. The lawsuit charged that it was unlawful for USDA to -- to do that. In the end, the lawsuit -- the ruling in the lawsuit stated that the federal register notice itself was ultimately a process change, and was not a final action, like an actual listing or de-listing would be, and that the court would rule on in terms of harm.

And so that lawsuit ended based on that sort of process determination. Ultimately, Congress then changed the organic through its
production act to require that any change the national list, an addition or a removal, required a definitive vote. And so that codified the federal register notice that AMS had published on the sunset process into the act. This is why we consider the topic closed, is because it was embodied within the act that any change to the national list, an addition or a removal, required a two-thirds majority vote.

So that's one of the topics that came up, or I wanted to talk through the sequence of events on why we believe that topic is closed. The second was -- there were a lot of comments on natamycin, and urging NOP to implement the board's recommendation on natamycin. That's another one where I wanted to walk through the process because it is a bit of a cautionary tale to remind people of how important the rule-making process is.

And so, just to review the history on this, based on -- the NOSB had recommended that natamycin be listed as a prohibited natural. Okay. So a recommendation was prohibited as a
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1

natural.

And so we included that in a proposed

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rule.

3

recommendation.

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natamycin as a prohibited substance in organic crop

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production.

So we proposed to implement the Board's

Many

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So the rule proposed to list

comments,

though,

during

rule

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making were received opposing that proposal.

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so in the final rule, the proposal was not adopted.

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As such, natamycin does remain allowed.

And

And so

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it is a reminder that there is a public comment

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process during the board process, but there's also

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a public comment process during rule making.

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it is important to have your voice heard in both.

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And so if you participate in the board

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process, also, come back and participate in the

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rule making process when things are published and

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proposed rules, because there's a full life-cycle

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of rule making that has to happen to take an NOSB

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recommendation and finalize it into a final policy.

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So I understand that some folks do want to keep

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an item open when NOP takes an action that many

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disagree with, or when a final action differs from

And

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a board recommendation.

I commit to when we close an item, I'll try to be more specific on why we consider that item closed, and it will be from a process perspective, why we consider that item closed, and what the drivers and criteria are for that. I think that transparency is important for being open about the process and being clear on where things stand.

So now let's briefly talk about next steps here. First, again, I want to thank everyone who participated in the process that led to the summary that I just gave you. I want to talk about next steps and tools from here. So first, every six months approximately in the late spring and late fall, the Office of Management and Budget -- you know, we talked about them a lot now, OMB. They published what is called the Unified Federal Regulatory Agenda. Again, the Unified Federal Regulatory Agenda. You can Google that.

And it lists the rule making activities that the administration anticipates engaging on
in the next year and into the long term. That is the most important codified list for formal vetted decisions about rule making priorities. So you want to keep an eye on that for USDA and AMS to see what USDA has formally committed to as priorities in the rule making process.

So rules that are going to be anticipated for the next year or so are published in one part of the agenda. There's also another part of the agenda that lists long-term action. So those are things that there's no date attached to them yet, but the department considers them important. And so I encourage you to do the exercise of finding the agenda and looking at it for AMS to see what's on the list, and what the long-term actions are. And somebody's just typed in the link, which is wonderful. So thank you very much.

Now at the program level, we do maintain the NOSB recommendations library. It's available on the NOSB recommendations page. So after this meeting, I commit to you that I'm going to review
that list again. I'm going to update it based on what we've learned through this process. So there are a couple of that have been marked as closed, meaning we're not working on them. I'm going to change those, too. I might need to come up with a new category.

But I do believe that based on this exercise, but also based on this administration's sort of openness to working on practice standards that that list may change. So I'm going to update that including more details. If we do still consider an item to be closed or in process, why.

So I'll give a bit more detail on that. We will also consider other ways to keep the community informed as we make decisions about priorities.

We do generally review standards, priorities as part of our regular program updates to NOSB. I will also try to share the reasons we've chosen not to move forward with certain priorities.

And I know that people will still disagree with those decisions, but I will be clear with you on what the current decision is and why.
We'll also look at how we might include more of this information in our memos to the NOSB that we complete after each meeting. Those are already standing mechanisms of communication. And so those have been sustained through multiple administrations as standardized tools that we use to communicate with the organic sector.

And so memos to the board are useful for communicating both to the board and the public. And since they're posted on our website as public comments, they can be tracked over time. And there are going to be times when we're going to say something in a memo to the NOSB, and a few months later, it will change because new information becomes available or priorities shift.

And so I do think there's always a little nervousness in putting on paper. Right now, we're committed to this, because if that changes down the road, well, you said five years ago that you were committed to this. And well, yes and that was five years ago. And so there has to be the ability to move over time and space as
conditions change. So I'm going to close there.

Again, thank you to everyone who participated in that process. That was a lot, but I think it was important to take the time to go through the summary because you took the time to have your voice be heard. And so thank you for listening to that readout. And I'm going to hand it back to Nate to facilitate any questions and feedback from the board.

MR. POWELL-PALM: Fantastic, thank you so much again for that update, Jenny. Round of applause. Thank you, this is -- it's exciting, our work is being heard, so we're really grateful for it, and there is more to do. So questions from the board for Jenny. This is sort of a general opportunity for Q and A from board members to the program. Carolyn, please go ahead.

DR. DIMITRI: Great. Thank you. Thank you for that update, Jenny. I have two questions about things that have been -- that predate me on the board, and so this is maybe also partly information gathering for myself. And one
is about native ecosystems, and the other is about inerts. And so there are two things that I actually know very little about.

And so I think for native ecosystems, I'm wondering, especially with this administration's interest in climate change, and I'm not really sure how native ecosystems fit into that. Is there, like, anything the NOSB can do to, like, reshape that or bring that to life, or is that just dead? Or I don't know if I'm allowed to be so blunt in my question, but that's me.

And then the other question with the inerts. Another thing that seems important to me, and it's like I'm not that kind of scientist, so I can't always wrap my head around it. It sounds to me like the NOP is going to take additional steps on this, and I'm just wondering if you can elaborate upon that process and how you see it going ahead.

Thank you.

DR. TUCKER: Yeah. Great questions. Let me talk about native ecosystems first. Yeah, this is one where there's a lot of science involved.
There's also a lot of emotion involved. People feel very, very strongly about this, and it really does strike at the core of organic, some very key questions. The challenge with native ecosystems has been that there is the intent of the organic community and the intent of organic. And then there is the actual act, the Organic Foods Production Act, and what it says.

And so the recommendation from the NOSB, it drew outside the lines of OFPA. And so it called for, like, a ten-year transition period. So there were things in that recommendation that really can't -- there's not a line back to the act on how it would fit within what Congress actually authorized us to do regulations on. So the question is, what's next?

There's also questions of costs there, that's -- there's a question of whether it would actually discourage transition, and questions of costs. So economic impact of that role. So it is -- right now, it is -- we do take the recommendations seriously. We have done internal
sort of thinking and talking and analyzing on it. And as some of the public comments said, you really can't get around some of the legislative issues.

So the question is, I've heard from folks who are willing to compromise on this and who have learned a lot also about the boundaries of OFPA. And so the question is: Does the board want it back? Would you want to request a work agenda item to see if you can come up with a recommendation that would be more closely aligned with OFPA?

I'm open to that conversation, because right now it is not actively on a regulatory agenda. I think if the Board -- is this is something the Board wanted to take another stab at closer -- more closely aligned with OFPA, I'm open to hearing about that and having that conversation.

On inerts -- inerts is incredibly complicated. And the Board has come up with recommendations on inerts. There is no easy button on inerts. And so there was a recommendation from 2015 that really called on us
to work with EPA and the Safer Choice Program. We've been in touch with EPA and the Safer Choice Program, and it's not a good fit with them.

They have a very different theory of the case, in terms of their reason for being is very different. They don't have a list that is codified in the regulations, which is a problem for us in terms of how the process works. So I think the recommendation that the board came up with is -- it's just not feasible, given EPA's definition of their programs.

And so we have prepared an -- the board at that -- has discussed this. And I've put -- the general feeling was we need to hand the reins over to NOP and the community for a little bit, through an advanced notice of proposed rule-making, to get some concrete recommendations on what the best path is.

So what we've done is, we consolidated all the conversations that have had done to date with a number of options based on everything that's been heard so far. And we've written it into an
advanced notice of proposed rule making. That would be a formal publication, the federal register, that everyone would then have the opportunity to comment on.

Based on that, it could either go back to the board for a very specific question. Or we could move ahead with the proposed rule, based on the feedback. It could go either way depending on what comes out of the ANPR. Carolyn, that was a lot of data, did it actually answer your question?

DR. DIMITRI: Yeah. Both of those were really wonderful answers. Thank you, Jenny. I think I have a much better sense of where, you know, where the world stands on those two very complicated and important issues. Thank you. I appreciate that.

MR. POWELL-PALM: Thank you for that question, Carolyn. Next up, Kyla.

MS. SMITH: Jenny, thank you so much. That was a great update. I'm going to ask you a question not related to anything that you just talked about. So apologies about that. But this
is sort of top of my coming off of OTA's Organic Week. And that being that there's several situations happening on the international landscape that either are or have the potential to impact imports of certain commodities, mainly soybean meal and certain oils.

And so I just wanted to ask you, what do we all need to know and keep in mind, up and down the supply chain or other stakeholders, if and when we are hearing about these shortages and are trying to preemptively plan for shortages that are being caused by the international situations?

DR. TUCKER: Yeah, great question, really important in the daily lives of a lot of farmers and a lot of processors out there in the world. So I'm going to share with you and then by extension, the entire community here, our policy on this. So the question relates to the use of non-organic feed and ingredients in organic commodities and products.

So generally how the question comes to us, may I use non-organic feed to feed my livestock?
Or may I use a non-organic ingredient in my potato chips or whatever my processed product? And so since the start of the pandemic in fact, the program has periodically been asked if we would allow the temporary use of, for example, non-organic livestock feed for organic, as an example, poultry. And the temporary use of non-organic ingredients in processed food during -- due to different types of supply chain disruptions.

You know, our primary mission has to be to protect the integrity of the seal and to ensure a fair and competitive playing field. So requests for exemptions to the regulations, such as the use of non-organic feed and ingredients, are handled through a process called the Temporary Variance Process, which is laid out in the regs and the NOP handbook. Those requests come from certified operations through their certifiers to the NOP.

And so with respect to requests for non-organic feed, it is longstanding published policy and practice that temporary variances may
not be granted for feeding non-organic feed to organic livestock. This is outlined in NOP 2606, which is our instruction on temporary variances in the NOP handbook. This type of both formal and informal request has been submitted for dairy animals in the past due to drought. And we have rejected it every time.

So these supply chains have -- questions recently have been different. They focused more on poultry than on dairy, but our messaging and policies have been consistent over time on that. We've also received the question about non-organic ingredients. Most recently, we reviewed and evaluated two temporary variance requests to use conventional non-GMO sunflower oil in place of organic sunflower oil in certified organic processed products due to business interruption.

And so I'm going to get a little regulatorily wonky here because I think it's important. The regulations at 7 CFR 205.290e, which is temporary variance -- it's part of the
temporary variances section, says that temporary variances cannot be granted for any practice, material, or procedure, prohibited under 205.105, which is allowed and prohibited substance methods and ingredients. Now, sunflower oil is not listed in 205.606, which is non-organically produced agricultural products allowed as ingredients.

And so as such, non-agricultural sun -- non-organic sunflower oil is a material that would be prohibited under 205.105d, and therefore may not be used in products labeled as organic. And so these are regulatory constructs that are laid out in the temporary variance section and its cross references throughout the regulations.

And so the use of only organic feed for organic animals and the use of organic ingredients in organic products, or it's consistent with the regulation, and is a core expectation for consumers, and is essential to maintain a fair and competitive market. And so I did want to -- I appreciate the question. We've been getting that question enough, but I think it's useful to review,
even though it's wonky, the full picture in this public setting. Again, that was a lot. How did we do?

MR. POWELL-PALM: Great. That was the wonkiness we need right now. It's a tumultuous time, so really appreciate the depth you do in there. Next up, we have Wood.

MR. TURNER: Thanks as always, Jenny. I apologize. It's going to be a little bit long as well, but I'll try to keep it brief. You know, as I'm listening to Sean Babington speak this morning and referencing this issue, and then trying to sort of reconcile the conversation -- the presentation from Adam Chambers with this sort of need for data. And sort of deeper data and deeper harmonization.

You know, something it's on my mind relative to that topic is the fact that we still have very persistent areas of certification for folks that don't have for socially disadvantaged farmers, you don't have access to as many systems, don't have access to the data collection tools and
the like, and so I'm just -- it's hard to sort of almost process sort of where we need to go relative to kind of the need for data.

And I'm just curious, I know you have spoken to this before, but I'm curious about progress that's being made at USDA and in the NOP to make sure that resources are getting allocated to farmers who have been -- who don't have access to the kinds of resources that are needed to be able to ensure sort of an affordable certification process. And I'm just curious about partnerships that may exist that sort of help ensure that folks who have not had access or not had as much opportunity to participate in the program, are getting some of these funding opportunities to a variety of means.

So if you could speak to that a little bit. And if you can put it in context for some of these leaps forward that I think the reference in some of what Adam particularly was talking about today. That would be really helpful, if that make sense.
DR. TUCKER: Yeah, it does make sense. And so let me briefly talk through -- there is a significant interest in the topic of how best to support farmers going through organic transition. And so last year, Secretary Vilsack did announce that USDA would be providing 200 million to support organic transition initiatives with a goal of building more, and better, and fairer markets for any farmer with interest, by helping farmers navigate transition and supporting a strong market.

The details associated with that organic transition program are being developed right now. And so we've heard a lot from stakeholders on the needs of transitioning farmers. So the importance of consistent standards and the importance of protecting those standards, but also the need to support transitioning farmers and remove those supply chain barriers.

And so we've heard that the need for direct farmer to farmer mentoring and technical
assistance to really have somebody right in your community who can help you understand, and navigate the technical aspects, who speaks in your language, and who understands not only the physical environment, but the cultural environment, the market environment that you're working in. And the need to engage knowledgeable really local partners that provide very much hands on, like, field base assistance, workshops, field days, access to local resources, and peer-to-peer mentoring.

And a range of topics, things like agronomy, certification, extension services, where do I go to get help, conservation planning, business development, navigating the supply chain, regulations, and even local marketing. Strengthening the link between conservation management and organic transition. That comes up over and over and over again.

We can do some of that at headquarters here. We can work closely with NRCS to talk about how do we get these systems better aligned. But
we also need to build the expertise across USDA to build a pool of organic inspectors, really focusing on those underserved -- traditionally underserved area in a way that supports equity while also developing market.

So that's a lot of need out in the community, and we have heard that those are the types of services that would help make that on-boarding into transition a bit easier. Again, we're not ready, USDA is not quite ready to announce a sort of a -- the formal program, but those are the types of things we've heard, and it does build on that commitment that Secretary Vilsack made about a year ago on organic transition.

So I don't -- right now, would have the specifics of that program to talk about. But I can tell you that it is a big point of interest and emphasis within the administration.

MR. TURNER: Appreciate the progress.

Thank you.

MR. POWELL-PALM: Amy, please go ahead.
MS. BRUCH: Sure. Thanks, Nate. Jenny, thank you for your detailed explanations to our questions that you're -- that we're answering -- or asking. Anyway, I have a two-part question on economics. I know economics is an additional metric the NOP leverages in order to evaluate the NOSB recommendations and to turn them into rules.

First part is, can you elaborate from what point of view economics are considered, since the organic community is diverse and consists of organic certificate holders and non-certificate holders. I just wanted to know that perspective of which viewpoint you look at and consider.

And then secondarily, I just wanted to know the timeline that you are also evaluating when considering economics. Because from a point of view of one group, costs might be high on the front end, but if you look at another group's point of view, they could incur significant cost down the road or accumulative cost.

DR. TUCKER: Yeah, you know, they have
entire courses on that question.

MS. BRUCH: Yeah.

DR. TUCKER: But I'm going to give a bit of an overview, because I think we are all learning a whole lot about what the Office of Management and Budget, again, OMB, is really interested in when it comes to cost with these rules. We learned as a team a lot in writing and finalizing, strengthening organic enforcement origin of livestock and in the OLPS process. And so -- and this is something that we don't consider as much at the board level, but is -- comes front and center during rule making.

And I think that is some of the times the disconnect, where people that go well, the board process should be, that is the thing. You know, what it -- what about all this stuff. It's the board stuff that really is at the heart of it. And we have to remember that rule making is under a completely different set of rules. That's called the Administrative Procedures Act, and OMB governs how rules consider economic analysis. And
that's really separate from any back-up process that governs the board.

And so I think there is a little bit of a switch that happens when we get to rule-making in terms of economics becoming kind of front and center. And so if OMB deems a rule significant or economically significant, meaning it hits a certain cost threshold, that we have a number of steps we need to go through for economics. Now, most organic regulations beyond routine national list rules are considered significant, because they raise policy issues that are novel, and therefore they required economic analysis.

So what does that actually mean? There are actually nine steps to it. We have to identify what the need is, so what is the problem to solve? We have to define the baseline in terms of how much does it cost now. So origin of livestock just published, that's an easy one to talk about. What is happening? So what are the practices out there and how much did those practices cost?

What is the time horizon of analysis?
So how quickly do farmers need to change their practices to a new method, and for how long will those cost be incurred. If you're talking about changes to capital investments like buildings and things like that, there maybe a longer time calculations and sometimes agencies use, for example, IRS depreciation models to figure those types of things out.

So there are a lot of different kinds of data that you can use to define the baseline and the time horizon on when things would change. Generally, you identify a range of regulatory alternatives, so no action is always an alternative. And then there may be different types of alternatives that have different costs with them. Sometimes those different alternatives relate to how long it will take for the implementation period, because different costs maybe incurred over different time periods.

What are the consequences of those alternatives, you have to describe sort of, therefore, what's the if-then consequences of each
of those alternatives, and quantify and monetize
the benefits and costs. You also have to discount
the future benefits and costs. And so they're all
sorts of economic formulas and very complex Excel
worksheets that go into these things.

There's also non-quantified and
non-monetized benefits and costs. So I think one
of the things we struggle with in organic is
quantifying the benefits. So how do you quantify
the benefit of a rule, because it turns out, you
know, consumer expectations sounds lovely and is
really hard to attach a number to when it comes
to something like origin of livestock, right? And
so how do you find the numbers that support the
benefits?

And how do you find the cost figures
when you're working in a public-private
partnership where certifiers have a lot of this
data, and there's a full range of production
practices. So those costs really do relate to
whatever the rule is at hand. And how do you
quantify or describe the consumer benefits or the
benefits to producers?

Now, it was interesting in SOE and this was in the proposed rule that was published. So I can talk about that. That the benefits outlined in SOE related to the avoidance of fraud. And so if you're decreasing the incidents of food fraud, you have to make all sorts of estimations based on published research on how much does food fraud cost. And if you take these actions, how much food fraud are you going to cut out of the system? And how much money is that going to save?

Again, it's very, very quantitative. And so we often in organic talk about the intent of the act, or our consumer expectations, or all of the non-quantified benefits, just like the climate conversation with data -- OMB likes data a lot. They really like data. And that's hard, and so the costs are considered -- the benefits are calculated based specifically on the alternatives in a rule, what the rule is going to do, and how it changes practices.

So for example, origin of livestock may
have actually a big impact in the market. The costs are actually relatively reasonably low compared to other kinds of rules. Now it might cost certain types of operations money, and there might be disproportionate costs based on the size of the operation and the current practices to change those practices.

And SOE, Strengthening Organic Enforcement, a lot of the cost are actually paperwork in nature, that certifiers need to do more supply chain analysis. So it's a lot of the costs of that verification need to be taken into account. So again, time analysis, time periods, and the actual cost and the audiences impacted vary by rule and by the data that is associated with a stakeholders who are actually impacted by those rules. I'm going to pause there for follow-up or questions. That might have been more than you wanted.

MS. BRUCH: No, that was really helpful to just understand, just because I do know, again, our community consists of those that hold
certificates and those that do not. And we work together in concert. So it was just helpful to hear that in a bigger picture of how these things are evaluated. Thank you.

MR. POWELL-PALM: Sorry about that. Thank you for the questions so far. As we move forward, we are running well into the lunch hour. So if folks could try to keep them succinct, you keep your questions succinct so we can all get to through everyone, and still have the time for a break, that would be great. So Allison, please go ahead.

MS. JOHNSON: I'll cut my long rambling preface to the question then. Thanks, Jenny, for your time and for the focus on climate smart agriculture today. I think it's really exciting to have recognition within our world of what organic can contribute to the conversation, and I'm excited to see it on our work agenda. And I'm curious, if you could say a little bit more about what you see the NOSB's role and our stake holders role in advising the program and raising the
profile of organic within USDA and the administration at large as a climate solution.

DR. TUCKER: I will also keep this short. I think the -- it's so important to come up with practical solutions. Climate can feel so big, and so multi-dimensional, and so messy. I would love the board to come back with recommendations that are practical for farmers and that help us communicate effectively about climate change both across USDA and with farmers.

And so, a lot of the questions we've asked are pretty concrete because it can get so big and so esoteric. But I do think, you know, the path for work can centralize so much around organic practices that are already being done. How do we explain it? How do we capitalize it? How do we capture it? How do we tell that story using data in a compelling way? How do we help organic farmers navigate that world? But I would love to see a focus on practical impact out in the community.

MR. POWELL-PALM: Javier, please go
MR. ZAMORA: Thanks, Nate. Thanks, Jenny. Anything they throw at you, it seems like you are very well prepared, and I really appreciate that. So my comments and my couple of questions that I have are really simple. I wanted to ask you, you describe the process and you summarized really nicely the different comments that we got written and verbal comments during the time the people, the public were able to make comments.

And one of the first questions is, and then there's a second period during the implementation of the ruling, that there's another opportunity for the public to make some comments. But not everyone does that. They don't return. And my question is: Do you -- does the NOP take -- consider the first set of comments at the beginning for the second process of implementation? Again, I'm new maybe, yes, but that's one.

And I'm saying this because sometimes there is a limit of how many people can actually
make comments. I'm talking about farmers and constituents around here. So it's limited, it's not for everybody. So maybe as they're doing the implementation of the ruling, it's -- it gets a little more corporate because people are following what's going on. So those initial farmers don't really have the opportunity to make comments again, because maybe limited to how many people. That's one.

And then, you also talked about changes of, you know, the percentage of the rule making doesn't get out of the pipeline. And a lot of people were very frustrated with that. What's the percentage of changes in, let's say the board, the NOSB board, some part of it now decides to makes a rule, but then it's an adverse at the end. What's the percentage of that? Because I hear, like, it's a high percentage.

And then I guess that's about it. But anything that as we talk and how fellow board members, how they're -- how smart they are. It sounds like there's questions, and questions,
questions about just every little thing. And I would probably be here for a week. But anyway, those are all my questions. I really appreciate you taking them on.

DR. TUCKER: Yeah, they're great questions. And so, I'll take the first one first about kind of these two phases of board work and rule-making work. And I do talk about participating in both. When we write a proposed rule -- so we do pick up a board recommendation, we write a proposal. That proposed rule, we do take the board input very seriously. And in fact, a lot of that proposed rule really describes what the recommendation was.

And it wouldn't even -- that -- it's very important background and context for why we're proposing it and how we propose it in the rule. So all of that work into the board process does feed forward into that proposed rule phase. I've gotten some really interesting recommendations and comments about how that tie-back could be stronger.

So for example, in the supporting
documents part of the docket, when we approach a rule, could we be more overt in linking back to board to work on a topic to make that connection more complete, so people who are working in the rule-making process can see all the work they might not be aware of, all the work that went into that. And that seems like a really good idea to me to tie those processes together and say, hey, this recommendation came out of an awful lot of work. And we do describe those in the proposed rule. The comment period, what we do, though, in a proposed rule that differs from what the board does, is we do, for example, for the significant rule, do a fairly detailed economic analysis, all the stuff I just talked about, in the answer to the last question, which is in the proposed rule, that isn't part of that NOSB recommendation. So it is new information.

And I think -- so for that phase, we do need everybody kind of commenting again on whether the costs are accurate, whether we miss costs or their benefits for which there are data
that we haven't captured. So the proposed rule
does capture the Board's work, but it also has this
additional cost component, which is why it's so
important to continue the comment process.

You know, we had three phases of public
comments for Origin of Livestock, where we over,
and over, and over, and over, and over again asked
please give us more cost data. Please give us more
data that -- to inform this rule-making. That's
where -- that part isn't really part of what the
Board tends to look at because of the criteria that
the Board is considering is different from the
rule-making process.

So I think that's why both phases are
important, and why they're different, and why
people who really do care about the economics are
paying very close attention in the rule-making
process, because that's where rule making -- that's
where the economics tend to play out is in the
rule-making process, not the Board process. So
they're slightly different emphasis points.

In terms of the amount of rule-making
that moves ahead, we do keep a -- it's kind of the score card, that recommendations library that we update. It has the percentage complete of all the recommendations that have come from the Board, what we've completed. Now, according to our tally, I'm going to use the lowest number.

For practice standards, it shows that we have implemented more than 80 percent of the Board's recommendation. We don't always implement those things through rule-making. But sometimes, I said it earlier, you don't have to change the rule. What you need to do is enforce the rule, or perhaps as dealt with through training, or guidance, or handbooks. The rule-making process is really long.

And so we have to pick those -- you have to pick those carefully in terms of, we only get so many points with all the different steps of the review process. Because we're competing with every other program, and every other agency for limited capacity at OMB, limited capacity at USDA. In all the different offices, I have to look at
all these rules. And there's -- there is the reality of political cycles, the reality of through put, and what can make it through all these different offices.

So that's why sometimes we don't move ahead with rule making. I do think we want to be -- I want to make sure that we're communicating more actively about when priorities change and why they change. Because we're all learning as we move here, and we're all learning what works, and we're all learning what doesn't work. And I think as long as we're all willing to learn together, we're going to be fine.

MR. POWELL-PALM: Ryan, please go ahead.

MR. CALDWELL: Well, Jenny, thanks so much for sharing all this with us. I cannot believe how many balls you have in the air. It's just shocking to me, but, you know what I mean, amazing job with it. I hope this can be -- hope ti can be quick. You mentioned that more information was needed in order to move the whole
hydroponics issue forward. But I'm wondering if you can just elaborate briefly on exactly what types of information are needed there?

    DR. TUCKER: So this is -- there was a 2010 recommendation on containers, so it's often kind of referred to hydroponics and containers, that's often referred to. When you actually read the recommendation, there's not a lot of detail. It's a fairly short part of that recommendation. And so standards, you know, container standards would be -- so if we worked on container standards, somebody suggested -- a few suggested in the comments that it would need to be, like, a separate section of the regs.

    For example, if there was a separate section of the regs. There's a lot of technical work that would need to go into that. And so -- and to defining what those standards would be for those types of production systems. We do not, at the program level, have that level of expertise. So the task force -- we did have a task force that worked on this issue before the Board voted on
hydroponics. I think it was 2017.

So there was a lot of work that went into that task force, but a lot of that work was on sort of the pros and cons of the system. Not what the standards would actually be, what those producers would actually have to do to comply. And we don't have that technical -- we have the regs that bind us all, and a shared set of standards that bind us all. But I think the point or the feedback has been they need to be more specific in order to ensure consistency and fairness.

And that's where I think a process would be needed to articulate what those standards would be. So right now, the USDA organic standards do govern that system, but more specificity would help implement them more consistently across different production systems, because systems are different in different parts of the country. So that kind of standards development work at a level of granularity is needed that we don't have right now.

MR. CALDWELL: Great. Thanks.

MR. POWELL-PALM: Thank you, everyone
for those questions. And thank you, Jenny, for fielding such a wide variety of questions all at once. Really appreciate your insight, and you said you can get us into the program on that. All right, folks, we are right pushing up to lunchtime -- well, actually, pushed well past it. So thank you for the great conversation.

Let's come back at half past the next hour. So it's 43 after right now. Let's give ourselves about 45 minutes for lunch. Livestock is looking pretty lean, so we'll be all right, I think, on timing. So let's plan to come back half past the hour in whatever time zone you're in. And we'll pick up with livestock right after that.

(Whereupon, the above-entitled matter went off the record.)

MR. D'AMORE: Yeah. Well, you've got a long history with the organics, and it's nice to see that some of us just have a long history with an aspect of farming or handling. And it doesn't always have to be or have been organics.

And as I said earlier, today, I was doing all of
that before organics was born.

And by the time it was born, was getting
enough traction from, you know, hydroponically
grown or living lettuce, or whatever you wanted
to say. But there -- there's no doubt that this
organic seal was something precious and something
we have got to continue to nurture. Yeah. Okay.

Well, I'm going to stop yacking and get my desk
straightened up, and thank you for responding.

MR. POWELL-PALM: Thank you.

MR. D'AMORE: Yeah. Take care.

MR. CALDWELL: Jenny, thanks for that
quick answer on that last one, I was worried about
asking yet another question as we went in to our
lunch, but you made it very quick, so that's great.

DR. TUCKER: Great questions today.

I enjoyed the discussion.

MR. CALDWELL: Your answer -- your
detailed answers were wonderful, and like I said,
I can't believe you can carry all that in your head.

That's amazing, so --

DR. TUCKER: I got to tell you, I love...
what I do, and I love us and that makes all the difference in the world.

MR. CALDWELL: Great. Great.

MR. POWELL-PALM: All right. Welcome back, folks. Half past, whichever hour you are in, so hope everyone got a little sustenance to keep us through the afternoon. We're going to be jumping right into livestock subcommittee. And this is going to be a fairly quick run-through, because we are not voting on any of the materials. We're just hearing from the board members who have taken on becoming experts in these materials. So I'm going to hand it off to Kim Huseman, the chairperson of the livestock subcommittee. And we'll go from there. Kim, all yours.

MS. HUSEMAN: Thank you, Nate. Welcome, everybody back this afternoon. The livestock subcommittee currently has a fairly light agenda. We do have six sunsets, though, that will be presented for voting in the fall. And it's been about six months since we've gone through these, so bear with us as we get our cadence down.
But we're going to start with the first sunset review, which will be chlorhexidine.

And I am actually also the lead for this particular sunset review. So I'll go ahead and hand it over to Kim. So we'll go ahead and get started here then on our first that review, chlorhexidine. Chlorhexidine is listed under 205 603(a) as a disinfectant, sanitizer, and medical treatments as applicable. For medical procedures conducted under the supervision of a licensed veterinarian. Allowed for the use as a teat dip when alternative germicidal agents, and/or physical barriers have lost their effectiveness.

Do want to point out that in the initial sunset review, we used the word surgical procedures. However, as per the national list, medical procedures under -- conducted under the supervision of a licensed veterinarian is the most technical verbiage. So in reviewing the written comments, and actually -- and oral comments during last week, did get a dozen responders for chlorhexidine.
The majority of the responders, including two veterinarians, did speak in the affirmation to keep chlorhexidine on the national list as a medical procedure used by a veterinarian. And spoke very highly of the necessity in those particular time periods, as well as a significant support for utilizing chlorhexidine as an alternative teat dip when other asked -- or when other products are not as effective.

We'll note that there was some comments regarding the use of a teat dip needing to be analyzed, and the review of the annotations should revert back to only for medical procedures. Essentially stating that necessity and natural alternatives being sufficient. However, in saying that, both dairy operators and veterinarians have supported the use of it as a alternative to a teat dip when other germicidal agents are not responding.

That was essentially the review for chlorhexidine. Any comments or questions? All right, seeing none, we will move on to glucose.
And for -- let's see, I'm sorry. I have tolazoline, sorry, listed next here, on -- on page -- or on paper at least. And so tolazoline will be Amy.

MS. BRUCH: Okay. Thank you, Kim. Tolazoline, so we're at 205603, and this is part A as disinfectant, sanitizer, and medical treatment as applicable. And then tolazoline goes on to say federal law restricts this drug to be used by whereon a lawful written, or oral order of a licensed veterinarian in full compliance with the AMDUCA, and the FDA regulations.

And then also for use under 7 CFR part 205, it requires, one, used by or on the lawful written order of a licensed veterinarian. Two, use only to reverse the effects of sedation caused by xylazine. And three, a neat withdraw period of at least eight days after administering to livestock intended for slaughter, and a milk discard period of at least four days after administering to dairy animals.

So there's quite a few restrictions
with this substance here. There's quite a bit of information out on use, manufacture, and international allowance. Currently right now, tolazoline is not listed as improved substance internationally or on food X, or IFO. Environmental issues with this particular substance is -- there's no published toxicity or carcinogenic studies on the toxicity or lethal dosage of tolazoline.

It is, though, listed by the EPA as an inert ingredient. The main question we had for stakeholders on tolazoline is just if there were any new non-synthetic substances that could be used to reverse the effect of xylazine and other sedatives as effectively as tolazoline. So that particular question in general, the community -- most folks were stating that they were unaware of any additional substitutes for this particular product.

But there was one commenter out of all of them that did comment that mentioned there were two substances that could potentially be used, but
there is not a history of them being used with regularity in farm animal medicine. So that was basically the answers and substitutions. And then comments in general, just to summarize those, tolazoline and xylazine are always used together. So there was a comment to say, can we review these two in concert during the sunset process. I thought that was interesting.

Another commenter mentioned that keeping emergency treatments such as xylazine and tolazoline on the national list will allow working livestock producers to both provide emergency care to sick animals and maintain their organic status. So all the comments were generally in favor of keeping this on the list.

The last thing, and this might be something to asterisk for address during xylazine sunset, was just there's some conflicting information between the usage from an FDA standpoint and the AMDCA. So that is something that the Board wrestled with a little bit back in 2015, when the last time this was reviewed. And
then in the tap there is some information that leads us to believe that maybe we want to take this up as a work agenda item to kind of dive into those conflicting view points on the usage of xylazine. So if there's conflicting uses to xylazine, then that would impact tolazoline. Amy.

MS. ARSENAULT: Any questions for Amy on tolazoline. Not seeing any hands go up. We will move forward. The next sunset review is copper sulfate, and this one belongs to Nate.

MR. POWELL-PALM: All right. Thank you. So we have copper sulfate. It's on the national list of allowed synthetic substances for use in organic livestock production under 205.603, as a topical treatment, external parasiticides, or local anesthetic. Overall, comments, especially from producers, primarily dairy producers, were in favor of retaining this material. And that is an essential tool in the toolbox.

The uses of copper, as we've discussed in kind of across the sub-committees, is tricky.
We do understand that it's a potential contaminant for the environment. And we're always looking for ways to identify other materials that might be able to serve the same purpose, while maintaining animal welfare and efficacy.

So as we look to alternatives, we did hear more talk about zinc, and identifying animal welfare practices that might reduce the outbreak of problems, especially in cattle production. It's something that I would love more input as we move into the fall meeting. But also thank you to all of the commenters who did bring really good information about their operations and their communities' operations on this material.

MS. BRUCH: Thank you, Nate. Any questions for Nate on copper sulfate?

MR. POWELL-PALM: I think Jerry has one,

MS. BRUCH: Oh, Jerry.

MR. D'AMORE: Not so much a question, but a willingness to share with you a brand new TR on this subject that's going to be coming in
within a month. It's supposed to be 65 pages long. But that's not how you judge a content. But I'm -- I concur with what you said. We are aware, it prompted us to the -- certainly at the crop subcommittee to go ahead and order another TR and I just would like to emphasize, as you said, across subcommittees, it's something certainly we are keeping our eye up.

MR. POWELL-PALM: Thank you for that.

Javier has a question.

MR. ZAMORA: Yeah. I'm just having a little bit of a hard time hearing some board members, like Jerry, the last one. I can hardly hear him. And I think he's speaking maybe too softly.

MR. POWELL-PALM: I think Jerry's mic picked up for me a bit. It was a little cloudy this morning, but it definitely got -- has improved.

MR. D'AMORE: Javier, I would like -- I don't know what to say to that other than talking louder, and that's what I'll do.
MS. HUSEMAN: We can hear you better there, Jerry.

MR. D'AMORE: Thank you all. Appreciate it.

MS. HUSEMAN: All right. Any other questions for Nate? Seeing none, we'll go ahead and proceed. And the next sunset review is elemental sulfur. And elemental sulfur belongs to Brian.

MR. CALDWELL: Thanks, Kim. And I'm usually criticized for talking too loud. So if I'm too loud, Javier, just let me know. So we're going to look at sulfur. And sulfur is used for many different purposes in organic agriculture. And this is at 205.63 B, as a topical treatment for synthetic substance used in organic livestock production.

And basically, the comments are -- were pretty much not -- not 100 percent in favor, but I have, in my count, I had eight in favor of relisting, and one saying more review was needed, and one against saying that it was not essential.
The question that we asked was: Are there alternatives that are sufficient to control external livestock pests? And basically we got no answer to that. We did get a listing of some materials that could be used, but there was no information about efficacy.

So essentially, in 2,000 -- the first time that this was proposed for use, it was added to the national list in 2019, and at that point, some livestock folks were saying that it was really an important need for their systems. So we got -- we have that in favor of it being essential, and then one person saying -- or one group saying that it was not essential, but no information about any efficacy of alternative controls. So I think -- just looking to see if there's any other -- any aspects that I wanted to bring up. Otherwise, I think it's pretty straightforward. So any questions on that one?

MS. ARSENAULT: Okay. Seeing no hands raised for Brian for elemental sulfur. Well done, Brian. Go ahead and move forward to lidocaine.
And lidocaine goes back to you, Nate.

MR. POWELL-PALM: Thank you. So lidocaine is used as a topical treatment for external parasiticides or local anesthetic. Mostly as we've heard, lidocaine is used for pain relief, especially in the dehorning of cattle. And I think lidocaine is one of those materials in the organic toolbox that helps keep organic really at the forefront of animal welfare.

And I think we heard that that dehorning and horn management in especially dairy cows, is a common practice that we all have to deal with. But having this tool available to reduce pain and suffering is very much in line with OFPA. And that was echoed in the public comments, both written and oral.

MS. HUSEMAN: Thank you, Nate. Are there any questions? All right. Seeing none, we'll move forward to glucose. And glucose is the last sunset item for livestock. This one belongs to Liz. So Liz, your first sunset review process, take it away.
MS. GRAZNAK: All right. I appreciate Nate's confidence in all of us in that we become very knowledgeable about these subjects. Okay. Glucose is a synthetic substance allowed in organic livestock production for medical treatment. For animal health purposes, it is primarily used as an aid in treatment of cattle when they go into negative energy balance, oftentimes after calving.

And this is also, well, it's known as ketosis, And glucose is a remedy for dehydration as well in cows and horses. My veterinary friend likened it to humans drinking orange juice when we need an energy boost. The main question that we had for stakeholders was whether or not other substances are available for the treatment of ketosis.

And if it is an equally necessary and effective tool for organic farmers for treatment of all stages of the development of ketosis. Generally, the comments that we got back, which weren't very many, were from the community that
they emphatically support the need for the use of glucose, and that it definitely should remain on the national list without further annotation.

    MR. POWELL-PALM: Nice work, Liz.

    MS. HUSEMAN: Great job, Liz. All right. Any questions for Liz on glucose? All right. Seeing none, we have concluded all of the sunset reviews for the spring meeting in the livestock group.

    MR. POWELL-PALM: Fantastic. Thank you, Kim. One thing I will just throw in there leading onto Liz's comment. It is a pretty tall order. When you are a board member, you come with certain expertise, and you may not be assigned subcommittees that reflect your expertise. So say, Liz is primarily, to my understanding, a vegetable grower. She doesn't deal with cows, but she has to learn a lot to be a good digester of information on behalf of the community.

    So I think some folks jump on the Board thinking I'm just going to really bring my expertise to the subcommittees that most align with
my experience. Unfortunately, that's not always an option. We need folks to serve on all the committees. So thank you, everyone, for going outside your comfort zones and doing really good work.

Next up, we're going to be moving on to compliance, accreditation, and certification subcommittee. I love reading that out because I always say CACS, and I really never remember what it stands for. So compliance, accreditation, certification subcommittee, and this is chaired by Amy Bruch.

MS. BRUCH: Hey, thank you, Nate. First off, I just want to extend a sincere appreciation to the subcommittee for the authenticity and diversity of perspectives that allow for valuable discussions on our work agenda items. And due to that robust deliberations that we do have, we're looking to extend our meeting time to just process more of these subjects that are important to the community.

I also wanted to extend a thank you to
the stakeholder community who engaged in this process to provide us with real, genuine, and insightful comments on our work agenda. For the fall semester, we'll be continuing our work on these current agenda items, as well as adding to the list. Work on the memo that was delivered to us by the NOP in regards to organics and climate smart agriculture.

So that kind of furthers the work that Carolyn did last semester, and she'll be the lead on that. One public comment to mention before we get started is, debate is healthy and allows us for opportunities to strengthen a foundational principle of oversight in the organic system. With that said, we have approximately 60 minutes and three topics to cover.

So we'll plan on trying to spend about 15 to 20 minutes on each one. And I'll work on prompting a five-minute warning just to try to keep us on track for each topic. So with that, Kyla, I will turn it over to you first.

MS. SMITH: Thanks, Amy. So the first
proposal we have to talk about is the NOP's risk mitigation table. So the NOP sent the board a memo on November 18 asking us to review the risk mitigation table that was developed in response to the 2020 peer review conducted by ANSI. This table seeks to document the ways that NOP safeguards impartiality in the delivery of their services according to ISO 17011.

CACS reviewed the table and did not identify additional conflicts to be added. The CACS did ask stakeholders to provide feedback on it -- on two specific things. The questions are listed on the screen there. So firstly, to provide feedback on if there were any conflicts that were missing, and also also to provide feedback on if any conflicts were unclear.

The public comment received was appreciative of the opportunity to provide this feedback. There were some areas that commenters identified as missing. And a few areas for further clarification. Most of the commenters stated that the table did a good job at covering conflicts of
interest, like, specifically related to, you know, personnel and decision making.

However, they identified that the areas that were missing were more related to other types of risks related -- or risks of impartiality. So I think we have a couple of options here, as the Board. We can -- I don't know that we're going to have the time in -- to debate all of the areas that were identified in the public comment, and parse through them all here today.

So we can either vote to move the proposal forward. And if the proposal would pass, then we can include a write-up in the cover sheet that the board recommend that the NOP include the suggestions that were identified in the public comment in the risk mitigation table. Or we can send this back to subcommittee, to further discuss each of the suggestions made in the public comment, and, like, sort of pass through them, in order to make a determination on whether or not we think that they should be included. And then come back with that more comprehensive proposal in the fall.
So let's talk about those options.

MR. POWELL-PALM: Who wants -- okay, Brian, please go ahead.

MR. CALDWELL: I'm pretty strongly in favor on sending this back to the committee. The way I see it, the table just does actually not include all the potential conflicts of interest. And so I think it's kind of directly against -- even if we put a whole bunch of caveats into the cover letter, it would actually sort of make the actual decision false. So I would like it to go back, and I think there's plenty more to talk about here.

MR. POWELL-PALM: Other thoughts? Amy, please go ahead.

MS. BRUCH: Yeah. Kyla, I appreciate your work on this. I think, you know, as is it does communicate needed information. However, I think part of the comments from the stakeholder community in expanding the scope, I think that there is additional work that could be warranted on this. So I would echo Brian to take it back
to subcommittee and work on a little bit more expansive approach on this really important table.

And then I really took note and Jenny also mentioned this in her remarks about the community talking about the importance of the handbook and where some of our best practices land, and then the regulations. And just -- I don't know if that'll be in scope in this during the second round. But I thought just that's an important thing for the community and our board to digest, because best practices are voluntary, and the regulations are really where the enforcement and legal actions take place. So internalizing that information potentially in this chart might be helpful as well.

MR. POWELL-PALM: Rick?

MR. GREENWOOD: I agree with the two previous commenters. I don't think there's a great rush to do this. And I think it's better with a lot of these things that we look at, that we get it right because we don't get another shot at it for many years sometimes. So a little extra
time in the subcommittees, I think, is well worth it to get it as close to accurate as possible.

MS. SMITH: Anybody else have thoughts? Go ahead, Kim.

MS. HUSEMAN: I was actually looking for the clapping emoji, but we don't have it.

MS. BRUCH: I mean, unless anybody else has any other comments or thoughts, I would go ahead and make that motion, but don't want to rush that conversation.

MR. POWELL-PALM: So we have a motion.

Oh, sorry. Go ahead, Jerry.

MR. D'AMORE: Thank you-all. At this point, there's no other alternative from my point of view. The slow down here is comments from our stakeholders, and for me at least, there's been no debate on those comments. So I would go right along with the flow and support that motion then.

MR. POWELL-PALM: Okay.

MS. SMITH: Brian?

MS. ARSENAULT: Would somebody please just reiterate the motion?
MS. SMITH: We didn't make the motion yet, so I will make it, but I just didn't want to, like, cut -- so basically it would just be a motion to go back to subcommittee. So we're just talking about the options at the pass. And like -- and I agree, it felt a little uncomfortable to me to just put, you know, hey, but it looked in the cover sheet without us talking through those -- each of the suggestions, so I -- I'm in agreeance with that.

Go ahead, Brian.

MR. CALDWELL: Yeah, I just wanted to say that I really appreciate the committee going through this. This is really tough -- tricky stuff. And I think it's a great example of how the organic community can really -- can really expand our reach and help us out. So I just want to put those things out there, and thanks all for work on a difficult topic.

MS. SMITH: Yes. I would 100 percent second that. I am not an expert in the world of ISO, and so I'm really grateful to the stakeholders who are more knowledgeable on that area, and can
provide us some really instructive and valuable feedback. Okay. I would make the motion to send the risk mitigation table back -- proposal back to subcommittee.

MR. POWELL-PALM: All right. We have a motion. Do we --

MS. BRUCH: I second it.

MS. SMITH: Okay.

MR. POWELL-PALM: So our first vote back to subcommittee. And we'll just be starting going alphabetically. We move forward one person each time we take a vote. So we have a motion on the floor to go back to subcommittee, motion by Kyla seconded by Amy. So Amy, you're the first vote.

MS. BRUCH: Yes.

MR. POWELL-PALM: All right. Brian?

MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry?

MR. D'AMORE: Yes. Thank you.

MR. POWELL-PALM: Carolyn?

DR. DIMITRI: Yes.
MR. POWELL-PALM: Rick?

MR. GREENWOOD: Yes.

MR. POWELL-PALM: Liz?

MS. GRAZNAK: Yes.

MR. POWELL-PALM: Kim?

MS. HUSEMAN: Yes.

MR. POWELL-PALM: Mindy?

MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison?

MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip?

DR. NANDWANI: Yes.

MR. POWELL-PALM: Logan?

MS. PETREY: Yes.

MR. POWELL-PALM: Thank you. Kyla?

MS. SMITH: Yes.

MR. POWELL-PALM: Wood?

MR. TURNER: Yes.

MR. POWELL-PALM: Javier?

MR. ZAMORA: Yes.

MR. POWELL-PALM: And the the the board chair votes yes. So unanimously, we are sending
it back to subcommittee. Is that the right tally you got? I should always check with you, Kyla, 15 and all?

MS. SMITH: 15 -- 15 yeses, there were no -- zero abstentions, refusals.

MR. POWELL-PALM: Fantastic.

MS. ARSENAULT: Okay. Thank you, Kyla. I appreciate that. We'll move on to our next agenda item, and that's by Jerry.

MR. D'AMORE: And I am unmuted, and thank you for the introduction. How about the volume? Are we all right here?

MR. POWELL-PALM: Sounding good.

MR. D'AMORE: Okay. So Human Capital Management, supporting the work of the NOSB. Then you referred to a document titled as NOSB technical support initiative, but they are one and the same initiative. The notion that the work load carried by the NOSB board members can be daunting, has been around for a long time. And this discussion document has its origins in the fall 2020 discussion document titled human capital strategy
for organic inspectors and reviewers.

That's where it all started, under the larger caption of human capital. The board meeting of last spring, one year ago, had a discussion document, again under the heading of human capital with a specific extension of that saying supporting the work of the NOSB. So the document contained in the spring 2020 binder reflects the CACS's desire to get feedback concerning NOSB technical support, specifically.

And I'm going to spend the rest of my time talking about the comments, because I find them to be extremely good and extremely revealing.

So there were 19 -- excuse me, 17 total commenters responding to the 2020 spring discussion document. About a third were oral and two-thirds were written. And most of these stakeholders did respond to all four questions.

And this one I got underlined, all of the stakeholders were in favor of some form of support for the NOSB.

So I'll review the questions and
answers. What are the advantages or disadvantages of having support come from within the government or from a non-profit or university? First answer, no to any US government support, as it would threaten the NOSO -- the NOSB's autonomy. The second one was no to USDA support. And that's quite a distinction, as it does threaten NOSB autonomy can -- according to this commenter.

Yes to inside support, but it should be limited to career scientists within the USDA, EPA, and FDA, who themselves could work with land grant universities. The public at large should be part of a support team through the use of the open docket. Support should come from within the USDA, as there is too much knowledge to be ignored.

Next, is expand your thinking to include the organic community. And then the last one, the last answer, regardless of where the technical support comes from, the NOP should be responsible for all contracting activity.

The next question, what NOSB tasks, if any, are critical to keep completely independent
of the support team? The support team should not deliberate or decide an issue. They should not write final proposals. They should not be voting or arguing for or against anything. They should not draft recommendations, discussion documents, or other Board documents. They cannot be the primary author or -- of a subcommittee document.

They cannot initiate poles of stakeholder groups. They cannot communicate on behalf of the NOSB or any subcommittee. The support should -- support group should vet and review materials and documents for regulatory accuracy. I'm going to ask you to remember that term, regulatory accuracy. We'll get to that in a moment.

Number 3: should the support team be privy to all subcommittee meetings and discussions? There's four people or four groups answered that, and they all basically said, yes, when it pert -- when they're discussing things that pertain to where you're being active. So I won't read all four of the answers.
The fourth question, what should be the scope of the NOP's relationship with the contemplated support group, i.e. should they be able to task the group directly? First answer, the NOP should not be able to task the support group directly. The next answer was no, period. The next, the NOP should administer the program by setting up contracts and making payments, et cetera. But the individual NOSB members should create the work plan. Direction of the technical support team should only come from the NOSB.

So those were the answers to the questions, but they're not where I found the most interest. They were good. But there are some random ones that did not address questions, and there's only five of those. And I'm going to read them to you. Create more time for critical thinking and reflection by going through this process. Use the endeavor to broaden the pool for a more diverse NOSB membership.

Make more and better use of your technical advisory panels. This initiative must
equip the NOSB to provide NOP with clearer, more legally sound and actionable recommendations. You might find backlogs disappearing. This is a two-way street, managing the NOSB is a huge task for the NOP. And my last one is just one sentence from a former board member that says, this initiative is long overdue, and if well done, could greatly enhance the work of the NOSB. Thank you for your time.

Ms. Bruch: Thank you, Jerry, for your overview on that. I will open it up to any questions.

Mr. D'Amore: I guess pretty thorough.

Mr. Powell-Palm: Looks like Carolyn has a question.

Dr. Dimitri: It's not so much a question as a comment. I mean, I wonder -- I try to think of, like, appearances of impropriety or conflict. And I think it would be very hard to have someone working for USDA and not at least giving the appearance of a conflict.

Mr. D'Amore: Yeah. I think conflict
of interest is probably the number one inhibiting
discussion item. And I guess my response is --
not to be cavalier, but my response is: I think
on this one that the juice is worth the squeeze,
and we got to find a way to do it. That's the way
I would answer that.

And being totally transparent, I think
we could manage that. But I was given this in
February, thinking what the heck is it? And I've
fallen in love with the notion, so I can't -- you've
got to discredit me -- or discount, excuse me.

DR. DIMITRI:  Well, I guess I have
another thought, too. And, you know, I guess maybe
because I'm in my position at the University, I
can actually hire a student to do, I think, a lot
of these activities that we're talking about having
available to other people. So in a way, I mean,
I think what -- I like having a person who is just,
like, my person and I ask her, hey, can you do this?
And it's, like, very defined and very tight.

And so I just wonder if there is another
way to do this without having to go through USDA,
because I do think about all of the medical conflict of interest and industry conflict of interest. And I think the research shows again and again that people think that they are never biased, but actually they are, because we just are unable to accurately assess how influenced we are by things external to us. And then I'm going to stop talking now, because I know I'm lucky.

MR. D'AMORE: Thank you for saying that. Yes, you are.

MS. BRUCH: Thank you, Carolyn. Allison, go ahead. I see your hand up.

MS. JOHNSON: Thank you. I had kind of a similar thought to Carolyn, and I appreciate that I'm quite green coming into this late in the process. So, hopefully this will makes sense, so I haven't missed something major. But it seems to me that members of the board will have different needs and could benefit from different types of support, given our broad range of backgrounds, and expertise, and work lives.

And I -- I'm especially interested in
finding ways to improve representation of different perspectives on the board, and diversity in the organic sector. So one thing I didn't hear here was maybe assistance in hearing a broader range of perspectives or from stakeholders who we might not interact with directly -- sort of a different type of technical expertise that I wonder if there's a way to encompass that here as well.

Assistance with diversity, equity, and inclusion issues and ensuring that we have those types of resources at our fingertips.

MR. D'AMORE: Yeah. Allison, actually, I meant to capture that. And then if this doesn't do it for you, I'll do a better job. Use this endeavor to broaden the pool for a more diverse NOSB membership base. So I -- and you know, everything that we're talking about is part of what is embedded in this proposal. And to the points that you both -- well, particularly you Allison, just made about well, excuse me, it was also Carolyn.

Some of us have resources, some of us
don't. Some of us have innate expertise, some of us don't. So the question really there is: How do we parcel out the resources that we might get to fit the needs of our entire group. And, you know, in subcommittee we were kicking around the notion, well, maybe this should be mostly a chairs bucket of resources, that could be then parceled out amongst the subcommittee.

There are 100 different answers. And I actually thank you, Allison, because if it wasn't strong enough emphasized that this is in my mind a significant potential road towards inclusion, more than anything that I've seen come across in my going on three years now, so thank you for the comment.

MS. BRUCH: Thank you, Allison. Rick, is your hand up?

MR. GREENWOOD: Yeah. Thanks. I guess a lot of it depends in this term, conflict of interest on what we expect these people to do. I mean, for some of the work that we do, it's highly technical. And I think that technical expertise
sometimes comes from people that work in industry.

And so very different than, I think -- because I can get graduate students too, but usually they don't have the expertise to do some of this work.

They can do more stat work, or you can have them get literature reviews and things like that. But for some of the work that would be in a sense, like a TR, you really need people that have been in the industry that know the impacts, or they have been growers. And all of those people, I think, come with a bias. And I think if you recognize NOSB membership, we come with a bias. That's part of who we are, we represent some of these groups.

So it really is a tough call, and I know I've seen Jerry struggle with it, but it's a tough one to answer. And I think there is concern, though, that if we go down this path, which I think we really need, our stakeholders are going to be very concerned about who we get to help on this.

MR. D'AMORE: Okay. I guess I read fast. And this is not to negate what you just said,
Rick, because I agree with every bit of it. But in my going on to three years, I've never been handed something where there was a universal stakeholder response of, get it done. Trying to put a -- you say, hey. They all have their different ways of getting towards a solution, but not one person stood up and said, I think it's a bad idea.

MS. BRUCH: Yeah, great point. Thank you, Rick, for your comment. And I'm going to just indicate a five-minute warning. So Kyla, is your hand up?

MS. SMITH: Thanks. I think my comments are similar to Rick's in that, you know, I feel like when we originally started talking about this, was in the wider conversation of human capital. And there was, like, the RFP that got put out. And there was no proposal submitted for this topic within that wider context.

So then I feel like we, you know, we were trying to think about, like, other options because, you know, it was discussed about, like,
you know who, what non-profit, or a university, or non-government entity could actually do what we were asking them to do. So it didn't seem like that was, like, a viable pass, right?

And now there's seemingly some concerns about oh, well, if it's housed within USDA, there's conflict of interest concerns or whatever. And so I guess I'm just struggling a little bit to -- it doesn't sound like there's, like, a shining, like, blinking, like, this is the best thing. This is what we ought to do. And so we're just going to have to pick what we feel like is a viable option and, like, try to put some guardrails around it, I guess, because it doesn't seem like there's, like, I don't know.

Yeah. The bright shining star of, like, this is how we should head. It seems like there's things we need to work out and consider no matter which path we take.

MR. D'AMORE: I entirely agree with that. For me the blinking light was the -- an oral commenter who actually got to the point of saying
that, gosh, he thinks their organization would be willing to contribute towards anything that led to, at that point, diversity. But there's no doubt that this initiative is going to be fraught with the necessity to be squeaky clean and transparent.

There's just no -- and how we go about it. So I'm at a loss right now just in terms of where do we go from here? Do we just -- can we say, hey, we'll talk about this further? Gosh, and gee wiz, thank you for presenting that, but it's too risky, where -- what's the next step?

MS. BRUCH: Yeah. I think, Jerry, that's a good --

MR. D'AMORE: I'm sorry. That's a procedural question.

MS. BRUCH: Sure, no, that's a good question. I think you made mention that -- and I'm jumping in here, sorry -- that the community as a whole is in favor of this. So the what, you know, we have almost 100 percent in favor of doing this. The how, I think, is what we have to focus on, kind of the next round of this for sure.
MR. ZAMORA: Yeah. It's not an easy fix, but it can be somehow tailored to the need of someone like me. I'll tell you why. Because I have the knowledge for growing things. I could probably communicate myself okay. But when it comes to the actual technical clerical knowledge, it's really, really hard. Something needs to be done within the NOSB, not the NOP or the USDA, because that would be a very big conflict of interest.

Maybe I could go to someone like ALBA, or another non-profit. If I go to a non-profit that has, you know, different ways of making money and actually handle a lot of money, there will be bias. Now, if nothing is done and try to fix this or have the help that someone like me -- well, someone probably that will probably suffer even more than me. To deliver on what's needed, or what this Board is asking us to do, it's going to be difficult.

You will probably not have a good solid
representation. Or what a mid-size, small family farm or farmer is, especially the Latino or some other than Caucasian. Now, I'm afraid that if the person that it's coming on behind me doesn't get the help, it's going to be really hard for the NOSB to have representation that -- it's needed, because you don't have to go far. Just look around and see who the farming community is.

So I'm coming on at a really good time to perhaps you use me as a guinea pig, if you will, to really make something out of this. I think it's 100 percent necessary. Because the very first -- I can personally tell you that the very first two or three meetings that we had, even right now, I'm having a really hard issue navigating the Dropbox and is this PR needed?

I'm really even afraid to really -- I really commend Liz because she presented something. And I know I am being asked to present something really simple, but I still -- I'm not able to get a good grip of what is it -- how am I going to present this? Now, does that mean I'm
not able to say or read something? No. It's just
navigating the steps that I needed to make sure
that I feel at least a former point that I'm
representing and I'm doing that constituents that
had asked me to be part of these board.

So I think there's quite a bit of work
that needs to be done. But I really, you know,
Kayla and Jerry, I think you -- you're on the right
track. We just have to see what that reality is
in the farming community and see because I believe
the farmer's seed perhaps might be the one or might
be the ones that are probably going to struggle
more with that. Again, especially the minority
part, and I'm here to make it work.

MR. D'AMORE: Well said.

MR. ZAMORA: I'm sure we'll make it
work.

MS. BRUCH: Yeah. Thank you, Javier,
for your genuine comment there, really appreciate
your candor. Liz, we'll wrap up with you for
questions or comments.

I had a really long conversation with a fellow organic farmer right after the end of the listening session last week about the exact same topic. And I heard from the listening session the comments that people really think that we need to have much better representation on the board of a more diverse collection of the organic community.

And, you know, more ethically diverse, more financially diverse, just diverse in general. And I came away from hearing that interest in wanting to address that topic. Thinking to myself, there's no way they will ever get any people from those communities to serve on this board because it will not -- it's just not possible. It will -- literally isn't possible.

I mean, I am having a very hard time giving the time that is required for the board to do my due diligence as a board member, because I am that very small certified organic farm that literally depends every single day on me being out in the field, working with my crew, when the carrots need to be, you know, hand weeded.
And I'm still, you know, I have employees, thankfully. But any -- I just know that literally there is a huge disconnect I think, between what the board says they want, and actually being able to achieve it because there's no way we will be able to represent those communities unless something changes.

MS. BRUCH: Thank you so much for being on the board, and sharing that perspective. I think we have a lot to review internally in our subcommittee, and this is definitely something that's a need. Jerry, do you have any final remarks? I wish we had more time as a whole board in this format to work through some of this. But I apologize, with our time schedule. But Jerry, just wanted to turn it over to you for any final remarks.

MR. D'AMORE: Oh, I am -- I'm in awe of the -- of responses. And the only thing I would say to you as Chair, is find more time for us to deliberate inside subcommittee. We got to -- we got a hell of a lot to talk about.
MS. BRUCH: Yes. Amen. That's for sure. These are really important topics that this subcommittee takes on, and the comments from the stakeholders are more important now than ever in this forum for our board to deliberate on. This is really important. Okay, well, moving on to our third agenda item.

This one is oversight to deter fraud, monetization, and supply chain verification. And this is actually a collaborative effort between myself and Nate. So I'll kind of kick off this and then turn it over to Nate to discuss the second part. And then we'll open it up to questions here. Try to go pretty quick over this overview so we have lots of time to hear board comments.

Really at the at the fall meeting, commenters indicated some steps that the community and the USDA could take in short order to enhance traceability efforts. And today we highlight two. The first one is reporting acres per crop type. And this in general could lead to improved granular or aggregated mass balances, and can be
a real tool for inspectors. The wide variety of stakeholder feedback, including certifiers, farmers in the plains community, in relationship to this particular item, generally seemed very supportive or in favor of accomplishing this one way or another.

Currently, there are a few certifying bodies that are capturing this information and placing on organic certificates or addendums right now, but there are gaps in this information since the practice isn't mandatory. In looking at the ACA, they have a document that is entitled, best practices for verifying traceability in the supply chain. And it states that the solution to transparency is that all certifiers submit this type of data, organic acreage reports to the NOP for inclusion in the organic integrity database.

This would enable a clearer picture of whether or not the organic land base supports production claims on small and large scales and allow for calculation of a mass balance across the supply chain. There were a few concerns of just
how do we go about articulating this information for small acreage, multiple crops, just clarification on, just how we’re going to categorize this information on certificates.

But there are currently some best practices in play that could help alleviate the concerns and other commenters were quick to point out about including livestock, these trays and mushrooms, et cetera. So one last comment before I turn it over to Nate, would be that reporting production area information certified by crop, livestock, and location on at least an annual basis to the organic integrity database is one of the most impactful single actions that can be taken to increase the integrity in the global organic control system.

And they also went on to say that they expected this information just to be at an aggregated level in the OID, just to help protect confidential business information. So I will pass it over to Nate for any additional information on acres reporting, or the next item up for
discussion, which is universal bill of lading.

MR. POWELL-PALM: Thank you, Amy, and thank you for your work on this. I think when we look at the ability to consistently identify red flags in the supply chain for organics, we have one chance every year to have an inspection. I think it's pretty well known that the chance of catching fraud during the inspection is fairly low, just because you're seeing such a snapshot.

And so as we heard from many commenters, folks rely basically on crowd sourcing tips. Is there fraud? Does anyone know of fraud? Where is it? And those tips are then sent up the chain to the certifier, and they figure out how to execute an enforcement action. As an inspector, oftentimes, we're trying to figure out, what is a complete story?

When we are writing an inspection report, we're trying to give the reviewer and the certifier a narrative of a farm where they don't even need to have been there because we're writing such -- in such good detail and giving them so much
information that they can make a really solid
certification determination. In doing that,
we're oftentimes only able to give really a very
succinct snapshot that doesn't have the ability
to test this system.

There's not a whole lot of
bi-directional information being looked at.
There's not a lot of quick tools to just check,
does all of this add up? And so when we're looking
at our audits, and we're trying to see, is the
operation we're inspecting telling us the truth
that they really did get all of their corn, say,
from one operation. And we have no way to really
go a step beyond that and say, does that operation
from whom they bought it even grow enough corn to
meet the needs of that farm or stack up against
the receipts that that operation is providing us
at inspection?

So what acreage on certificates I think
would really do is just enable inspectors to be
better data gatherers about potential red flags,
where we see a possibility of an issue of concern
where we could say, in either direction, anyone
who's done business with this operation, we could
see is there something of concern here? And that
ability to crowd source more red flags, I think,
is what we're seeing as the only real way that fraud
gets busted.

The only way that we see real
enforcement action is when we have more and more
pieces of data about potentially fraudulent
actions. Because several certifiers, three from
whom we heard, are already doing this. And many
of their farmers are telling us on last week's calls
that it's not an -- a concern for them. They're
fine putting their information on there. And they
see it as a way to contribute to the greater
transparency of the system.

I think that that's points for your
proposal, Amy, or discussion document -- for this
idea that we could have acres on certificates, by
crop. Addressing those small holder concerns,
like you said, Amy, that if you have a lot of mixed
vegetables, or you have a very small amount of land
that you're certifying, and needs to go down to, say, square feet or what have you, the certifiers who are already putting acres by crop on the certificate, have already addressed the same concerns.

So I think we have some fairly good models with several years behind them that we can look to. I just want to throw out that we definitely heard everyone's concern that SOE is nigh, hopefully, so let's not get the cart too in front of the horse. But I think that this question is really something that is such a very simple way to increase transparency and increase the utility of that inspection. Being able to look at certificates and try to check if there's any evidence of fraud in that inspection.

MS. BRUCH: Thanks, Nate. Brian, I see your hand up.

MR. CALDWELL: Yeah. Thanks. This is a really important issue, and I really am totally in favor of the idea of including crop acreage, or acreage by crop on the certificates. I think
it will be really easy to not have problems with really small producers. I think mixed vegetables is a totally fine category for maybe under, say, five acres, something like that.

And if anything is -- if any one crop is maybe more than an acre, it could be specified and I don't think that's a really difficult, you know, record keeping problem at all. In fact, you know, one of the big issues with certification is that it really helps you keep track of the records that you need. And you know, pretty much everybody, feels that way, at least the small scale producers in particular.

So I'm totally in favor of that. I think that in terms of fraud, we really need to focus on targeting measures of detecting fraud on the potential areas where fraud is likely to occur. And so I'm thinking that any farm less -- with less than $100,000 of gross sales should not be a prime target for any kind of special fraud detection, you know, record keeping or inspections or whatever.
Because I really don't think that they're the problem. And certainly if there is some fraud in a smaller farm like that, it's not going to distort the market. But we're talking about fraud that really does distort the market and can really hurt legitimate producers. So anyways, those are my thoughts on it and I'd love to hear what everybody else thinks.

MS. BRUCH: Thanks, Brian, for that perspective. Kyla?

MS. SMITH: Yeah, thanks. I feel like sometimes I -- when I talk about these things, I feel a little bit, like, complainy or whiny because ultimately, like, we will figure it out. But I will say that, you know, what did Jenny say, what -- there's 76 certifiers right now. There's probably 76 different ways that certificates are being issued, and that taxonomies are being used, and the look of the certificate and all that. And so I know that, like, maybe some of that's going to get solved with SOB.

When the OID came out, you know, PCO
used to put mixed vegetables on the certificate.

And once that taxonomy came out, and because of suppliers requesting more detail, like, they were, like, mixed vegetables isn't cutting it anymore, until we were having to produce, like, all these extra letters, which was, like -- and it just injured an additional administrative burden to produce that. So we started putting that right on our certificate.

And so for us to go back -- have to go back to mixed vegetables for, like, to solve this thing is just, I don't know, from -- it seems like a bit of a step backwards. Or we would have to have, like, one certificate in this one case, because we have to pull data and specify things in a certain way out of our database. But a different certificate in this other case.

So, like, when I'm thinking about, you know, acreage and how it's going to get recorded, that's how my brain is working, is like how am I actually going to do this with the data that's going into the database. And how am I going to have to
re-specify the certificate and all these different cases? And we haven't, as other certifier -- or some certifiers had indicated that don't put that on.

And we haven't either because we had viewed it as confidential business information. And so -- unless it wasn't, you know, mandatory, I wouldn't feel comfortable without engaging with our certified operations to gauge whether or not they would want that on a public facing document. So I think that's all I'm going to say right now.

MR. POWELL-PALM: So if I hear you right, Kyla, if it was mandatory and all certifiers were requested to do it, it would make an even enough playing field that'd be worthy of the investment?

MS. SMITH: Yeah.

MR. POWELL-PALM: Thank you.

MS. BRUCH: Thank you, Kyla. Let's go to Javier next and then Logan.

MR. ZAMORA: Trying figure out a way -- whether someone is buying and re-selling them
-- they're being dishonest about their operation.

It's not that difficult, but it's really touchy.

My certifier the last couple of years, they'd been asking about the mass content, how much we're producing, on how many acres, to the point now where everything -- every time we plan something, we need to get into their website and enter whatever we're planting and how much acreage.

It feels personal, but I think something needs to be done, because there are certain things happening out there that actually affect the smaller grower. But you know that two, five acre grower that is very specialty crop, and they plant, you know, leafy greens three times on the same area, four times during the year, radishes or cilantro whatever it is.

But there is -- there's ways, I mean, I think when you grow like this, it's because you have a CSA, or you sell at a farmers market. So you have a constant usage of the land, and you're planting constantly. I mean, the CBC had commissioners, the issue for someone to sell it
at the farmers market. It tells you per pound, or linear feed, or boxes, all those things there. And it tells you how many certificates do you have to be able to sell the farmers market, so there's ways to do things if you really want to catch someone. But I think the problem here is are you invading the grower's privacy. I think it should probably be a little larger scale. In our area, you're just starting to be large when you have 30, 40, 50 acres.

Maybe in, you know, somewhere else in the United States, 50 acres is probably your back yard. But, you know, for me, I mean, I'm a little over 100 acres. I'm actually a mid-sized grower now. But small here is just like 10 or under. So I think it has to be by size of acreage probably. Something that really complicates things is how diversified a specialty crop grower is. We have some people that grow 50, 60 different things. We have growers that we might just grow 20, 25.

So the tools are the -- out there. It's just how deep and how personal do we need to get?
That's the question, without really feel like you're invading people's privacy and farmers' privacy. Again, if you're going to mandate things, some of us might not like it, some more, there's might be okay with it. But it just depends how much more work you're going to create for the producer, or whether the producer has the personality to keep track of all these things.

But everything is there. I mean, we report them to insurance, how many boxes of strawberries we've produced. We report to the insurance company. We report to the hired commissioners, we get the USDA census that we fill every year, and all these things. So it just depends which route we need to go.

MS. BRUCH: Yeah. Thank you, Javier.

MR. POWELL-PALM: Yeah, one thing in there.

MS. BRUCH: Yep, go ahead, Nate.

MR. POWELL-PALM: I really appreciate that insight, Javier. I think that's something that gives us some fuel to this discussion, is that
this is already existing data. How do we make the
data useful for catching fraud? So really this
is nothing on the producer. It would change
nothing for the producer. It would be work for
the certifier. And that's why I want to hear.

I see Kyla and I so value everything
she has to say about the subject because we're all
in this together. And we don't mean to put -- it's
not about trying to make more work. It's trying
to leverage data and reporting that we already do
to be more effective. So, sorry.

MS. BRUCH: Thank you, Nate, for saying
that. I was going to say something similar that,
that's for sure. I know we're running up against
our time commitment, at least for this section.

MS. PETREY: Yeah, Amy, don't worry
about it, Javier wrapped mine up with the USDA and
insurance requirements the farmers already have
to do. So he got into. So I'm covered. Thank
you.

MS. BRUCH: Okay. Thank you, Logan.

I really wanted to hear from you, Kim, and then
Brian again, and then we can make our game plan, Nate, if we have additional time here.

MS. HUSEMAN: So I'll echo that from the perspective of FSA acreage data. And then I actually was looking into that as we were talking. But the challenge is to define an umbrella statement or expectation that encompasses everything from a linear feet to a section. And it's very, very difficult to do. So I think that's where I get hung up in this situation is where I listened to you, Javier, as a farmer and how he's designed his plan.

And how I grew up farming, where you're talking mile lines and sections and so forth. And then try to come up with a very similar statement that's going to encompass the plot that I grew for farmers market. That is difficult. And this is a challenge, and I -- this is a good challenge for us to have. And -- but the other aspect to it is, and I asked this during public comment, you are going -- we are going to get multiple responses as to where is that line between traceability and
transparency and confidentiality.

And, you know, I just want that to sit with everybody in -- and, you know, determine what does that look like as well. So I don't know the answer to these things, but these are things that come across to my mind. But I guess it also goes back in and I'll bring it back full circle to my initial question -- or a statement around, you know, there's data within the USDA. Is that plausible to utilize from a certifier standpoint, and just lastly, to sit with everyone is, you know, are all certified operations, or are all certifying bodies utilizing the same mechanisms, you know, when looking in this arena. More statements than questions.

MS. BRUCH: Thank you, Kim, I really appreciate your insight. Brian, we'll go with you and then we'll wrap up this topic, okay?

MR. CALDWELL: Yeah. Yeah, really quick. Just, you know, I thought about, you know, whether buyers need to know specifically whether this one farm, you know, grows cilantro or not,
or something that I think Kyla was referring to. And of course, you could say mixed vegetables including, and then you list all your certified crops. And you're getting an organic premium for those crops, and it's -- it's not a big burden to just list them out.

And again, the certifier should already have that information on the field forms of what crops are being grown, so I don't feel like it's, you know, an extra burden. And in terms of confidentiality for the small grower, I mean, I grew 20 -- or for 20 years I grew five acres of vegetables. And I really don't think there was any confidential -- confidentiality issue with letting anybody know what I was growing on those five acres.

So I don't -- I guess, I don't get what the problem is there, for a small-scale operation.

So those are my thoughts on that little aspect.

MS. BRUCH: Thank you, Brian. And this is a really good topic. I appreciate all the different viewpoints on this. I think some
highlights with this conversation was just, one, to build on the harmonization of data, so this data already exists. Can we streamline the data collection to make it relevant for our OSPs? To not create any extra work for farmers.

And then these diverse operations, meaning the smaller ones that are having a lot of crops, you know, there are some best practices, I think, in the queue that some certifiers that are indicating crops on the certificates are doing. So I think there's some learnings that can happen there.

And then, you know, in general through oral comments and written, there was overwhelming support really for this type of initiative, just because it's the basis to identify certain regions just the volume of products that they're exporting or producing, does it match acres? So we can look at it on an individual field level, or we could look at it over a large region area, too.

So there's different applications for just getting this simplified information. So this
is really great. I wish we could go on and on to discuss this, but I appreciate everybody's time today. And probably, Nate, I'm just assuming we'll kind of table the discussion and work on the second part in subcommittee, which is the universal bill of lading. I think there was some good information we received from stakeholder comments on that to kind of start deliberating on in our subcommittee.

MR. POWELL-PALM: Yeah. I -- the only thing I would throw onto that, is it sounds like farmers -- especially farmers, but a lot of groups, are celebrating that organic is the most traceable system we have. There's just some very obvious sort of black boxes in the supply chain that could be addressed. And I think continuity of lot code, especially in durable goods like dry grain, is something that's being flagged for us as a missing piece, and something that was not consistently being carried through.

So we love -- and I think this is one of the reasons I love organic so much -- is that
it is so traceable. But looking forward, how do we improve that traceability? I think we heard a lot of good things and can continue the discussion about universal bills of lading, or the ideas about how do you make this traceability even better.

MS. BRUCH: Thank you, Nate, and I will turn it back over to you.

MR. POWELL-PALM: All right. Wow, we are, like, 10 minutes ahead of schedule and feeling fresh. So thanks everybody for bearing with us today. This is great. As we look to tomorrow, we're going to break here, probably top of the hour is when we're scheduled, but we might even be a little bit ahead of that. We're going to start handling tomorrow, and we've got a good heavy lift on that side.

And then after lunch, we're going to be hearing from the Organic Seed Alliance, as well as NIFA, with some updates there. Any closing words, Michelle, before we head out for the day?

MS. ARSENAULT: I don't have any. I think I -- we had some information on the slide
about tomorrow, but I think you already went over that. So all right. Thank you, everyone.

DR. TUCKER: Wonderful day. Thank you all. You guys did a beautiful job with some complex discussions.


(Whereupon, the hearing in the above-entitled matter was concluded at 4:51 p.m.)
The Board met via Videoconference at 12:00 p.m., Nate Powell-Palm, Chair, presiding.

PRESENT
NATE POWELL-PALM, Chair
MINDEE JEFFERY, Vice Chair
KYLA SMITH, Secretary
AMY BRUCH
BRIAN CALDWELL
JERRY D'AMORE
CAROLYN DIMITRI
ELIZABETH GRAZNAK
RICK GREENWOOD
KIM HUSEMAN
ALLISON JOHNSON
DILIP NANDWANI
LOGAN PETREY
WOOD TURNER
JAVIER ZAMORA
NOP STAFF PRESENT
MICHELLE ARSENAULT, Advisory Committee Specialist
JARED CLARK, National List Manager
DAVID GLASGOW, National Organic Program Associate Deputy Administrator
ERIN HEALY, Standards Division Director
ANDREA HOLM, Materials Specialist
DEVON PATILLO, Standards Acting Assistant Director
DR. JENNIFER TUCKER, National Organic Program Deputy Administrator; Designated Federal Officer

ALSO PRESENT
KIKI HUBBARD, Director of Advocacy & Communications, Organic Seed Alliance
MAT NGOUAJIO, National Science Liaison, Institute of Food Production and Sustainability, NIFA, USDA
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MR. POWELL-PALM: All right. I think we're ready to kick it off. So we're going to start with handling, but before that, I think it'll be nice just to do a quick roll call -- hear from everybody. And if you wouldn't mind -- and please forgive me, I won't do this all the time, if we could do a brief ice breaker where when you say you're here, also just say something that surprised or delighted you from yesterday's meeting. And we can kind of get reactions for what we covered yesterday because it was a lot, a lot of information flowed. So apologies to the early people who don't have a lot of time to think about this, but let's dive in.

So getting us started, Amy, if you want to go first.

MS. BRUCH: Sure. Thank you, Nate.

Hello, everybody. Amy Bruch here. And to answer the ice breaker question. Let's see, one, I guess, that time goes so quickly. That was
something that was nice to see there. Also, two, I was just really overly impressed with the amount of information the NOSB was able to receive from the program. Jenny's comments and her thorough review of just how -- the public comments and where those fit in the priorities that the program had, was really insightful. I'm glad that we were able to spend as much time on that issue as we did. So, thank you.

MR. POWELL-PALM: Absolutely. Thank you for that.

Brian, please go ahead.

MR. CALDWELL: Yes. I'm here, and I'm always astonished at how articulate everybody is. And I try to make up for it by stumbling around a little bit when I talk, but this group is really quite amazing. So that was my shocker for the day.

MR. POWELL-PALM: I would echo that. It's a great group.

Jerry, please go ahead.

MR. D'AMORE: Good morning. I thought it was going to be tough being at the beginning
but it, you know, it's not, because everybody has already said what you want to say. Anyway, good morning, Jerry. I agree with you, Brian. Listening to the whole group, the NOP as well, it was smooth, it was informative, and it was fun. So that wasn't a surprise. It was just what happened. Thank you.

MR. POWELL-PALM: Carolyn, please go ahead.

MS. DIMITRI: Hi. I also really hate these ice breaker questions.

MR. POWELL-PALM: I know.

MS. DIMITRI: I don't know why. I feel so much more comfortable when I, like, impose them on people than when I have to answer them. But I was delighted to see how people paid attention for such a long period of time.

MR. POWELL-PALM: It is a haul. Yes. Thank you for that.

Rick.

MR. GREENWOOD: Again, it's going to be harder as we go along for the other people to
answer. But I also am always impressed at the
discussions that we have and how thoughtful the
comments are and how respectful all the board
members are to each other, and to the program.
And again, just a great example of this
public-private relationship. I mean, I think it's
wonderful.

MR. POWELL-PALM: Hear, hear.

MR. GREENWOOD: Yes.

Liz. Oh, still on mute.

MS. GRAZNAK: Okay? Got it.

MR. POWELL-PALM: Yes.

MS. GRAZNAK: Yes. Good. Good
morning. Yesterday was my first NOSB meeting.
So the whole thing was really fabulous. But also,
you know, very new for me. And I also have to say
that I am so proud of my team because they ran the
farm without me yesterday. So it was a really --
it was a great day all around.

MR. POWELL-PALM: Fantastic.

Absolutely.

Kim, please go ahead.
MS. HUSEMAN: All right. So I am Kim, and too must go, everything I -- although I agree with my colleagues, I was delighted to see Liz present her first Sunset yesterday. Handled it marvelously. And looking forward to serving on the the board with you Liz. So, well done on your first Sunset.

MS. GRAZNAK: Thank you.

MR. POWELL-PALM: Hear, hear.

MS. HUSEMAN: Thank you.

MR. POWELL-PALM: Mindee, please go ahead.

MS. JEFFERY: Good morning. I'm in the love fest too. Thanks, everybody, for being such a great team and being so fun to work with. And that honestly, like, on all sides, I'm so grateful to the program and all the work that goes on in the background. And happy anniversary, Michelle. Thank you so much for 10 years of service and 20 years to the certifier. I mean, just love fest of organic all day.

MR. POWELL-PALM: It was fun to see how
many of those 20 years certifiers there are, and there still are. I mean, that's really, really cool.

Bumping on. Allison, please go ahead.

MS. JOHNSON: Morning. I was delighted to hear Sean Babington recognize the long list of things that Organic does best. He talked about, water quality, erosion, cover cropping, crop rotation, soil health. It's so good to hear people higher up within USDA recognizing what we all know and looking for ways to understand it better.


Dilip, please go ahead.

MR. NANDWANI: Good morning. I was delighted to hear of our guest speakers, as Allison just mentioned, from NRCS as well as from climate-smart agriculture. Those two were fantastic. Very, very good to hear and a lot of good updates because as a university faculty I'm writing some grants and that will be very helpful.
And also I -- this is my first NOSB meeting. That was first day and it went very well. And I was really amazed to see how coordinated efforts of everyone is playing, whether it is from NOP staff, or from administrators, or from board members, and as well as from the listeners who passed wonderful comments. And I was really, really amazed to see this coordinated effort. Thank you.

MR. POWELL-PALM: Thank you.

Logan, please go ahead.

Apologize?

MS. SMITH: Logan was going to be delayed this morning.

MR. POWELL-PALM: That's right. Yes.

MS. JEFFERY: Yes.

MR. POWELL-PALM: She told us that.

Yes.

Kyla, please go ahead.

MS. SMITH: Hi, everybody. Well, I wholeheartedly agree with what everybody has already said. So I'll pick something new, and I have two. So first thing, I was delighted by
Nate's run of show, first meeting as the chair.

I think it went off swimmingly. So all the way just from keeping us sort of on time, thanks to Kim, and -- as well as your eloquent response to Mr. Babington. And also I was so delighted and impressed by the new members' participation in their first meeting. So, thanks.

MR. POWELL-PALM: Absolutely. Thank you, Kyla.

Next up, we have Wood.

MR. TURNER: Well, doggone, I was going to say to Javier, Javier, when you live down here in the outback where you and I live, and where Kyla lives you -- you know, you never get a chance to say anything new. So we have to lean on the chair to sort of reverse the order sometimes. So -- and --

MR. POWELL-PALM: Cheers.

MR. TURNER: -- and just at the last second Kyla robbed me blind of my ability -- my opportunity to say how much I appreciated Allison, and Liz, and Dilip, and Javier leaning into this
process yesterday and really kind of finding their voices on this board. So, that was what excited me the most. So --

MR. POWELL-PALM: Absolutely.

MR. TURNER: -- try that one on, Javier, and see what you can do.

MR. POWELL-PALM: All right, Javier, go right ahead.

MR. ZAMORA: Thanks. Yes. I -- well, thank you. I guess you guys almost said it all and it gets -- for a beginner, it's gets really difficult. But I just wanted to say that I -- first of all, I'm really happy that I was able to stay in one room for, like, five hours, which is very unusual for me. My anxiety was started to kick in towards the end. I had to go out.

MR. POWELL-PALM: I feel you.

MR. ZAMORA: But I'm just really impressed on the wealth of knowledge that we all have from different environments and it's -- this is a very unique board. It is really demanding, but it's great to see all your experiences and
expertise coming on one platform and I think I'm going to learn a lot of from you. So yes, I am here, and [inaudible].

MR. POWELL-PALM: Thank you so much, everyone. I'll throw mine now, napalm bomb. And I was delighted by a couple of things. But I think the thing that struck me most was our discussion around climate change and how we are actively pursuing this dialogue to make sure that Organic is recognized for what a solution it is, and how we have a really great infrastructure to provide a market oriented solution to climate change for farmers, as well as businesses looking to invest in, I would call social solutions to climate change. So I'm really excited for further conversations that we might be able to have with USDA.

And just can't thank Jenny enough for those updates. I feel like our entire community was lit up yesterday with excitement about how we are making progress. And so thank you, Jenny, for taking so much time to prepare so much information
for us. Really appreciate that.

All right, team, now that we're all
warmed up, shall we jump right into handling? Are
you ready, Kyla?

MS. SMITH: I am ready --

MR. POWELL-PALM: All right. Take it
away. Thank you.

MS. SMITH: -- to go, Mr. Chairman.

We're going to reverse the order a
little bit in handling. So apologies for that.
But we're -- had some members that had some tech
issues, and so we're sort of switching it up. So
we're going to start with the 2024 Sunset, and
attapulgite and diatomaceous earth are being moved
to the bottom of the Sunset list. And then we'll
circle back around into the proposal for CPC and
then the proposal for phosphoric acid annotation
change. So with that, we're going to be starting
with bentonite, and Wood is the lead.

MR. TURNER: Thanks, Kyla.

So we have a substance bentonite which
is 605(a) nonsynthetics allowed listing. It's a
-- historically it's been a pretty straightforward material. We haven't done a technical report on it since a TAP was done in 1995. So it's been fairly straightforward and I think that's largely been because our comments have been pretty straight -- pretty, you know, pretty limited over the years.

It's a processing aid, not an ingredient. It has absorptive qualities to make it useful for taking out impurities in oils, clarifying beer, fruit juice, and the like. Not something that is present in the final product.

It's -- some of you are probably familiar with it in a variety of applications. You know, it's a clay material that, you know, takes on a distinctive clayey smell in the presence of liquid is -- but it is insoluble in water and liquid.

The listings. There's a sort of a mix of listings internationally for allowing the material. I think in some cases it's just simply not noticed or not recognized as something of concern, generally regarded as safe. There were some comments from the community. And I would say
largely there was no opposition really to the relisting of the material. I think the biggest issue I think we want to think about over the next several months in preparation for the fall, is sort of whether the material should be clarified in the annotation because of some discussion about, sort of, acid treated versions of the material versus non-acid treated versions of the material.

And I'm still trying to get up to speed on, sort of, what that really indicates or what we need to learn about that. But I -- that -- most of the conversation is typically from -- some sort of buyers have asked for that -- have asked for some clarification on that point as we think about relisting the material. I think that's all I want to say at the moment. Are there any questions?

MS. SMITH: Okay. Are there any questions for Wood?

And then we will move to magnesium chloride, which is me.

Okay. So magnesium chloride is listed at 205.605 nonagricultural, nonorganic
substances, not as ingredient in or around processed products labeled as organic or made as organic. And there is no annotation. So magnesium chloride is used as -- mostly as a coagulant or firming agent in tofu production, and is also used in dietary supplements, and can also be used as a color retention agent.

We did ask two questions related to this material on whether or not the use of magnesium chloride as a color enhancement is consistent with organic principles; as well as other materials that appear on the National List with similar -- or same functions and just how they're comparing, and if they offer alternatives there -- or if these alternatives offer the same or similar function.

We did get several comments and most were in favor of relisting. However, there were several commenters that suggested annotating to limit the use. So if we are finding that because this is, you know, mostly used in tofu production, you know, and in dietary supplements, to specify that in the annotation. And mostly, that was the
recommendation, was to limit the use for those two reasons. And so I might infer that with those comments, perhaps there is an indication that stakeholders believe that the use as a color enhancement is not consistent with organic principles, although no commenters explicitly stated that in their comments.

And no one really addressed the second question in regards to other substances, you know, offering same or similar functionality and essentiality. So overall in favor, perhaps look at the annotations. And I would still be curious to hear more direct answers to these questions in the fall. So they'll probably, you know, stay and people have -- could provide answers. It's always helpful to have more information. Any questions?

I don't see any.

Nitrogen is next. That's also me.

So nitrogen. We're still at 205.605, and (a) nonsynthetics allowed, nitrogen, oil-free grades. This material is used as a -- to reduce oxidation of product during processing, storage,
and packaging. It's also used in flash freezing. And all commenters were in favor of relisting. This is a pretty slam dunk one. Any questions?

Yes, Brian.

MR. CALDWELL: Hi Kyla. I'm just wondering, it says, nitrogen-oil free grades. And I think of nitrogen as a gas. I'm just wondering how there could be oil in some grades?

MS. SMITH: That's a good question that I'm probably not going to be able to answer specifically here without looking back in the TR. But, Rick, do you know?

MR. GREENWOOD: Yes. I think I can answer that.

MS. SMITH: Okay.

MR. GREENWOOD: Depends on the production method because sometimes the compression, how they compress it to turn it into a gas, can get oil into it. It's very similar if you're a scuba diver and you need air. You need to make sure that the compressors don't leak oil. So there's -- it's cheaper, but oil free grades
are obviously better for food. And if your breathing, its also a good thing. So it's really how it's made.

MS. SMITH: Okay. Any other questions. Okay.

Next up is Dilip with sodium carbonate.

Dilip's first Sunset.

MR. NANDWANI: Thanks, Kyla.

Good morning again. So the sodium carbonate, it's listed as a nonsynthetics allowed, 205.605. And past NOSB actions, 2015 technical report, and as well as 2017 Sunset recommendations available. So subcommittee reviewed -- but the first, it's use. And sodium carbonate, which is also referred as washing soda or soda ash, and used as a raising agent. And it can also be used as an anti-caking agent -- sorry, caking agent, acidity regulator, a stabilizer, or as a neutralizer in food industry.

It's manufactured and produced in North America from naturally deposits of trona ore and in California, sodium carbonate can be produced
from using natural brine. So subcommittee forwarded four questions to stakeholders. First question, is this material still essential for organic handling and processing? Second, are there alternative materials that can replace sodium carbonate? Third, what are the relative environmental impacts of trona mining or brine extraction during production of sodium carbonate? And the fourth, is sodium carbonate produced from trona or brine extraction nonsynthetic? So we got a lot of comments and -- from the stakeholders, and which are supportive to continue relisting of sodium carbonate.

I found one comment interesting, which I will mention at the last, but before that, I would like to say a few comments. One certifier mentioned, quote, There are no viable organic alternatives and the material is compatible with organic principles. End quote. Second stakeholder provided, Numbers of certified organic operations use sodium carbonate. Another one mentioned that, Our options for cleaning of our
manufacturing facility are limited and thus the removal of any materials allowed for cleaning can be problematic. Also a commenter mentioned that, We are not aware of an adequate substitute for this cleaning agent. If sodium carbonate were to be delisted. End quote. One comment, which is from a non-profit organization, which remains neutral on sodium carbonate and does not take a position on whether individual substances should be added or removed from the National List.

So the one comment which is interesting, I'm going to say that. The commenter or stakeholder mentioned that sodium carbonate is a caustic and corrosive material and questioned the listing of sodium carbonate on 205.605(a) without an annotation. Sodium carbonate may be produced from mine deposits or by chemical reaction, and that is a solvay process, they call it, which is synthetic. So if the NOSB intends to allow only the nonsynthetic version, it should annotate the listing produced from mine deposits.

If the NOSB intends to allow synthetic sodium
carbonate, then it should also be listed on 205.605(b) with the annotation, Produced using solvay process.

The handling subcommittee has not received a technical review that examines alternatives. The handling subcommittee should propose an annotation, clarifying the classification of sodium carbonate. It should request that the audit examines alternatives. And again, lastly, public commenters supported the continued listing of this material. Thank you.

Any questions?

MS. SMITH: Great job, Dilip.

MR. POWELL-PALM: Just want to throw out a -- great job, Dilip.

MR. NANDWANI: Thank you.

MS. SMITH: Go ahead, Brian.

MR. CALDWELL: Thanks, Dilip. Just wondering. Is sodium carbonate used essentially for the same purposes as sodium bicarbonate, which is baking soda?

MR. NANDWANI: There was one comment,
I think, I read that about sodium carbonate, but it says sodium bicarbonate. But I don't remember because that stakeholder put together several of the materials into one re-listing. So at this point, I don't have a clear answer to your question. But several of the stakeholders, they have reviewed, actually, several handling materials and they were kind of going through with that re-listing, including the sodium carbonate where it says bicarbonate. I can get back to you once I review my TR back, and I can get back to you.

MR. CALDWELL: Great, thanks. It sound -- it seems to me just off the cuff that it's probably just sort of a little bit of a stronger reactant than bicarbonate, but I could be wrong.

MR. NANDWANI: I don't know Rick has any idea, or maybe Wood, because he's also part of subcommittee and they may have reviewed this material before. Any comments from Wood or Rick?

MR. GREENWOOD: I'm not that familiar with those, so I have no comment.
MR. TURNER: Nor me.

MR. CALDWELL: Thanks. I'm good.

MS. SMITH: Okay. Next up is Carolyn, with acidified sodium chloride.

MS. DIMITRI: Okay. Acidified sodium chloride is a processing aid made from natural citric acid and it's -- has a secondary direct antimicrobial food treatment use, and an indirect food contact surface sanitizer. So basically, this is not very widely used. There were a few -- no objections really to relisting. And then one commenter suggested that this is something that we could look at in our review of sanitizers if that is actually something we're doing. I know there's been talks -- a lot of talk about sanitizers, and I don't really know where all of that stands, but this should maybe fit into that category. So that is basically what I have to report. Any questions? Please don't make a thing about review of sanitizers, though.

MS. SMITH: Okay. I see none. Carolyn, you also have carbon dioxide.
MS. DIMITRI: Another interesting product. It has several uses, carbonation of beverages, it's used in modified atmospheric packaging and storage, and also used for pest control in storage for green and produce. And overall, there was a lot of support for relisting this product, and no one suggested that we should not relist it. Any questions?

Mindee.

MS. JEFFERY: Thanks. A question in general for the group. I'm trying to wrap my head around carbon dioxide in total for organic systems. So in handling relist it as a synthetics allowed, does that mean by implication natural is allowed also, natural versions of Co2 in organic systems in general? Or is that kind of outside the scope?

MS. SMITH: My understanding of the handling list is that it does not function the same way as the crops and livestock list, where nonsynthetics are inherently allowed. My understanding of the 605 is that it needs to be listed in both places.

MS. SMITH: Yes. I mean, Jared, correct me if I'm wrong, but that's always been my understanding.

    Thumbs up from Mr. Clark.

Any other questions for Carolyn?

MS. DIMITRI: Everyone likes their carbonated beverages.

MS. SMITH: Yes.

Okay. Wood, you are next with sodium phosphates.

MR. TURNER: So we have a listing for sodium phosphate the 205.605(b) it's in allowed synthetics for use only in dairy foods. Sodium phosphates are salts used as pH control agents and buffers in organic dairy products. They stabilize milk, can emulsify cheese, and several other functions that are relevant to dairy production. They've been -- they're in that class of materials that have generally been regarded as safe.
But, you know, they -- the comments over the years on sodium phosphates has been notably mixed, mostly along the line -- let's say in the context of concern about human health impacts and, I guess, it's what I would consider to be a debate on essentiality. You know, one of the issues on the health side is that there are other phosphates on the list. And so the implication that any one phosphate is particularly -- should be implicated in any human health considerations is hard to support in the science. But there is a -- there's always -- historically there's been a, sort of, a continued attention to this particular issue.

It's also, as a phosphate, you know, has some inherent eutrophication sort of water -- pollution to water body concerns. Phosphates are historically, you know, part of the scene in preparing detergents so -- I think we're all familiar with that. So, you know, and I -- and then I'll also just point out that there's a -- there is a -- in the process of making or producing sodium phosphates, phosphate rock is mixed with
sulfuric acid to form phosphoric acid. And given
the fact that we have another conversation today,
a proposal on phosphoric acid, you know, there are
some implications for that proposal, Kyla, on this
particular material, and some concern in the
community about phosphoric acid as an ancillary
substance that is involved in the production of
sodium phosphates. So I think that's what I'll
say, for the time being.

MS. SMITH: Thanks, Wood.

Any questions for Wood? I'm not seeing
any.

We will go to Allison with her first
Sunset presentation of potassium acid tartrate.

MS. JOHNSON: All right. Not casings.

MS. JEFFERY: Hold on. Yes. Are we
-- casings or which one are we doing? We have
casings on the slide.

MS. SMITH: Okay. Sorry. The order
on my paper is --

MS. JEFFERY: It's so good.

MS. SMITH: Go ahead, Mindee.
MS. JEFFERY: Okay. Thank you. Sorry. I wanted to express my gratitude for the cadence of the way we do Sunsets because I don't live in this work every day in my regular life as a retailer. So I really appreciate the clarifications and the timing that we get to really dive into these substances and make sure we get all the perspectives landing in my understanding. So I just wanted to say that. And I love the spring meeting and our process of discovery.

So for casings, listed at 606, casings produced from intestines -- 606(b). And I had a couple of questions for certify -- for the stakeholders there and got some really great answers. Commenters in general are supportive of relisting for the few area -- a few areas for discovery. One group noted that nonorganic casings rely on chemically intensive livestock production, which in turn relies on chemically intensive corn and soya production, and asked the NOSB via the TR process, to identify the barriers to organic casing production.
Another group requested that we think about having a work agenda item and a discussion document on the -- on those barriers, with the rationale that if organic meat is being slaughtered, then organic casings theoretically exist and should be required. And I'm super grateful for the lengthy answer to that question submitted in public comments by a producer, outlining the barriers to organic production of casings.

The more predominant casings in organic processing, according to this stakeholder, is derived from hog intestines. And since the organic hog industry is growing and it's tempting to assume that organic casings are available, that may be true at some point, but issues of scale are still at play. Organic hog production is roughly 0.058 percent of the US totals. Intestines are not uniform within one animal, among herds, and throughout the population. In processing intestines are selected, sized, and assessed for quality.
Farmer raised hogs for this producer has produced variable intestine sizes, making these casings unfeasible to use. They noted that small plants that slaughter less than several hundred hogs per day do not have the infrastructure to save, clean, sort, and select intestines. Instead, intestines go in the inedible barrel as offal. If separate -- if segregation were possible, it would take two to three weeks of organic production to accumulate just one barrel of intestines from organic hogs. And if it becomes possible to segregate, those intestines then wouldn't have an outlet for final organic casing production.

So, really appreciated the depth of that comment by a producer who really understands the dynamics. A certifier reflected that most organic sausage makers use cellulose as an alternative, but this doesn't meet consumer expectations. So a lot of really great information there from the comments. Is there a question?
MS. SMITH: Nate, I saw your hand raised?

MR. POWELL-PALM: Yes. I had -- it came and went. But the question I would have -- I echo your appreciation and defer the comments that we did get. I think for the folks asking -- trying to put two and two together where they're saying, there's more hogs being slaughtered, why don't we have a casings industry? That's something I would really like to hear more about in the fall meeting and put on the community to do a little bit of that business research, talking to known suppliers of organic casings and -- or casing production, and see what the barriers are? How, as a community, we can figure out how to overcome those barriers. I think I might challenge the growth of the hog industry assumption. It is still pretty small and it is not growing like the other species sectors. So I would just think that our community could come up with some really good business insights for how we might be able to do that.
MS. SMITH: Thank you.

Amy.

MS. BRUCH: Yes. I agree with Nate, and just to try to have a little bit more a window into this world, I would be curious, you know, right now, what would be the ratio of using organic casing versus not, and see that percentage. If we can ask the community, you know, where it stands currently and then that was insightful by that producer to understand some of the barriers. I think, you know, those comments, I think they also wanting to attach them to this 205.606 category is really a huge opportunity to just leverage the $62 billion industry that our organic marketplace is, and start making opportunities for additional organic growth in some of these areas.

MS. JEFFERY: Yes. Just -- I definitely -- I really like your comment, Amy. And living on this farm right now I'm having this opportunity to watch the difficulty that a small producer faces in gaining access to processing facilities and then being able to do that
organically, is a barrier that I think we see as a country. And I hope that Organic can become part of the solution for the small producers in that area as well.

MS. BRUCH: Yes. Absolutely. One thing to add before -- I know there's other people that have their hands up, is these barriers. Actually some of them can be accomplished, I think, through this grant process that we heard about yesterday. You know, a climate-smart agriculture, the emphasis on processing systems, the emphasis on just more stakeholders being able to produce more things on their farm. So, you know, there's the conservation innovation grant. And also, you know, the climate-smart agriculture grants that we heard about yesterday. I think there's a point to processing and packaging equipment that I think producers should try to leverage a bit more of.

MS. SMITH: Thank you, Mindee.

Okay. Kim?

MS. HUSEMAN: Thank you, Kyla.
Maybe this is segueing into Amy's last comment, is the difference between live production and processing. And I think where I'd be interested to get more feedback is from the manufacturing process and the barriers inside of the facilities around segregating and maintaining organic status once the harvesting process begins.

And how, you know, what barriers and challenges there from that perspective. Then, you know, couple that with fragmented space, and what suggestions would be to try to overcome that fragmented space.

So all good things, though. And we see this in other aspects, not just casings, but this can segue into multiple facets in the animal production and green production aspect, as when you take a whole part and then divide it into its sub-parts. And how can we have organic stability in multiple arenas. But, yes, this is definitely one of them.

MS. SMITH: Carolyn.

MS. DIMITRI: This is just some general
information that I think might help when we think about casings as we go ahead. And so if you look at the 2019 census of organic farms, there were only 166 that were producing hogs. And in some research that I've been doing over the past year, you see there's a lot of pressure on organic livestock producers in terms of they don't have enough processing capacity and they don't have enough feed capacity. So, I don't know. I mean, it might be useful for us to think about, like, at what point would the hog market be developed enough where actually there could be a supply of casings that could be used as an input into the, you know, the next level of the supply chain.

MS. BRUCH: So I can only maybe think of one additional thing and this is a little bit of a carryover from yesterday. Carolyn was referencing census information and this could potentially be helpful, you know, when we were talking about --

MR. POWELL-PALM: Amy, we're losing your sound a little.
MS. BRUCH: Sorry. Can you hear me.

I'll --

MR. POWELL-PALM: Yes. Much better.

MS. BRUCH: -- try to talk a little louder. Okay. Yes. I don't know where I left off, but I was just mentioning that Carolyn brought up the comment about looking at information via census data and I know that that's not a all-encompassing status on what the market really has. So again, I'm just going to point out our -- the CACS comment about acres on certificates and that there were the community feedback about getting livestock information on certificates. So that would be a real good way to mass balance the current status of the industry with clarity. And having that information can be helpful to solve maybe some of these 205.606 type questions that we have. So, thank you.

MS. JEFFERY: That's the great comment. Thank everyone for all the input

MS. SMITH: Okay. I'm not seeing any more hands.
So, Mindee, I'm going to get the order right now, we're going to go to pectin, which is also Mindee.


Okay. So pectin, here we are 205.606, and you'll notice we're at (o) now. We had a recent rule-making that changed the listening to (o). And major question here is, what is happening with developments in the organic source of pectin? Public comments definitely support the relisting of this very ubiquitous and widely used substance in many areas. Routinely used as a stabilizer, a thickener, and a gelling agent, and that organic alternatives are not available or don't meet -- function at the same quality.

A commenter emphasized that pectin is essential to low sugar jams and there are no alternatives at this time. And that consumers with specialty diets rely heavily on certified organic low sugar jams. Pectin producer
associations commented that supplies of organically produced fruit and citrus peels are simply not sufficient to produce enough pectin from organic sources. Most of the time, we heard from an oral commenter, that it seems like most of the organic fruits that could be used to make pectin are sold as whole fresh fruit.

And again, you know, we saw a lot of different commenters noting that the supplies of organic fruit peels are insufficient. They're listed as essential by a number of different organizations and comments. One group suggested that low methoxyl pectin is a result of a synthetic process and the National List should be limited to the high methoxyl pectin as it is extracted from citrus and apple. A group suggested that all 606 listings should be seriously considered for removal.

An oral commenter -- oh, I already got that one, sorry. And then we saw that slide from the oral comment that was on -- reflected the functionality of pectin versus alternatives in the
categories of the gel texture, protein stabilization at low pH, mouth feel in beverage, and acid stability. Pectin, according to the commenter, was the only organic alternative that could meet all four expectations. Yes. That sums me up. Are there any questions?

MS. SMITH: Go ahead, Amy, and then I have one.

MS. BRUCH: Okay. It sounds good.

Thank you, Mindee. Again, this is a 205.606 and just another point on being able to solve some of these barriers to additional organic use would probably be looking at, you know, the benefit from a farmer point of view. Also farmers you mentioned, you know, are selling their fruits mainly to the whole fruit market. There are, you know, irregularities in products that go to juice. And to have -- for a farmer to have a dual income stream, both for their main product and also a byproduct would be really helpful and create the synergistic effect really to grow farmers' farms. So I really think a 205.606 identifying the
barriers, like you mentioned in the past, but looking at the relevancy to our current marketplace, I think would lead to a lot of opportunities that aren't being tapped into for professional organic producers.

MS. SMITH: I had a similar comment. Just about -- as you said, Mindee that, you know, so much of the product going to the whole fruit market. But yes, what about all the peels that are coming off of oranges that are for juice, or apples for juice, or apple sauce, or whatever. So where did those end up and can -- if -- can those be utilized into making organic pectin.

Javier.

MR. ZAMORA: Yes. I was just going to say I echo what you just said. I think there's a big opportunity there for some producers. I know you're going to sell your apples as fresh and -- and maybe for juicing and stuff, but there's other crops that could be used. I can only think of two right away. And number one is quince. Second, there could be some wild apples that could be used.
And the third one, maybe the guavas are really, really high pectin crops. I'm just thinking on my childhood and how in Mexico quince candies are created in a very easy way. And they can make it really easy, as well as the guava, you know, kind of a candy type of thing that are very predominant in the Mexican culture. So maybe there's a good opportunity there for some producers that can, you know, use some of those things.

MS. SMITH: Thanks, Javier.

Brian.

MR. CALDWELL: Yes. In our area, there's an increasing amount of organic apples being used for hard cider. And so the pomice, which is the -- after the squeeze -- after the juice is squeezed out, the pomice is what's left over, and it seems like that could be, you know, a source of pectin. Often now, it is just applied to the field where it has really beneficial effects. But I think that there's -- if -- a problem would be that if pectin is allowed under 205.606 that's not organic, there would never be a sort of an organic
price premium that would allow an organic pectin market to develop, or a organic pectin production facility, or something to develop. So I think that might be one of our barriers as well. Not sure how to address that.

MS. JEFFERY: Yes. Thank you, Brian. That's a -- it's a good point. I think I missed the opportunity to also say that I appreciated one certifier listed that they had 49 nonorganic pectin uses and 4 organic pectin uses. So I think there is a little bit of development that I really hear you on. How do we move the needle on this one?

MS. SMITH: Rick.

MR. GREENWOOD: Yes. Just a comment for some of the new board members. I've been on the board long enough to know that we continually struggle with -- and I guess, I'll call it the chicken and egg thing, trying to get new markets, but at the same time not destroying the existing ones. And so how do you get incentive if you keep the nonorganic products on the listings, and develop the new market. So I don't think -- at
least in my mind, I have never figured out how we can do that. It's almost like we need a parallel process.

The other comment I'd make is, from reading some of the things from the pectin people, all pectins are not the same. And they seem to have -- they like citrus pectin more than apple pectin and others. So I think it also would take reformulating their products. So it's really -- it's a difficult problem that we've dealt with on so many other levels. But -- so I don't have an answer, but I thought I'd at least mention the problem.

MS. SMITH: Yes. Thanks for that, Rick. I will say that there have been examples. So, hops being one that I'm thinking about that was on 606. And there was then enough of an organic, like, hops market, and then whoever, you know -- I don't remember all the ins and outs, but had sort of worked to corner that, and really develop that market petitioned for the removal on 606. So I do think that there is a process and
a path forward for that if, you know, someone out there really gets a stronghold in the organic pectin market, they can petition for the removal. So, anyway, that's the current process as I know it. Any other questions or comments on pectin?

MR. POWELL-PALM: I just always think of 606 as the land of business opportunities.

MS. SMITH: I know, right?

MR. POWELL-PALM: A little more surprised that people aren't just constantly jumping on these. It seems like the framework is here to help the business along.

MS. SMITH: Okay.

Okay. Now, back to potassium tartrate with Allison.

MS. JOHNSON: Thank you.

All right. Potassium acid tartrate is a 606(p). Most of us know this material as cream of tartar. It occurs naturally in grapes and it's a byproduct of wine making. It has a few main uses. It's used in baked goods, as an ingredient in baking powder, and for stabilizing egg whites.
also used for pH control, including for adjusting acidity of wine and as a antimicrobial.

And it's basically an extract of the crusty sediment that sticks to the sides of wine barrels and wine vats and it's extracted with hot water from wine lees, which is the dead yeast and grape sediments. It doesn't involve any reagents or solvents, just hot water. This material was changed from being listed as a nonagricultural synthetic to agricultural in 2019 after the last round of Sunset review and the NOSB recommendation. So it does have that commercial availability requirement attached to it now.

We received a handful of comments. Several certifiers noted that they have clients who use it, including as a pH adjuster in wine making, and in baked goods. Several comments seemed neutral, the other had no clients using it or no member comments, and many noted that there are no listed products. And there was only one comment in support of removal. They argued that this material is a product of chemical intensive
agriculture, which is always a really important reminder for us, I think, when we're looking at all of these 606 listings. And they advocated for Sunsetting it to ensure that organic is required, and also noted that there are substitutes for baking, although the link that they provided in solution said that it's actually pretty hard to substitute for.

The stakeholder question presented is about whether there is enough supply to meet commercial needs. And we didn't get any comments on commercial availability, although several commenters noted that they'd be interested in the answer. No certifiers said anything about how they oversee the commercial availability searches for operations that are using the nonorganic form. So it'd be really helpful before the fall to hear from anyone who produces, uses, or certifies organic potassium acid tartrate. It's hard to tell if there's actually any on the market from what we've received so far.

I will note that from -- putting my,
well, certifier hat back on, I think commercial availability for this material is particularly hard because it's derived from wine, and that because of the input limitations for organic wine, there are very few wines that are actually certified organic. Most have the made with organic grapes claim. So I think that means that we could only -- the only source of potassium acid tartrate as organic will have to come from those organic wines, and not made with organic wines. So that may be a limiting factor. That's all.

MS. SMITH: Questions for Allison. We are like rocking the schedule by the way, guys, I've got to say. Next up, we are going to get into some proposals. And the first one --

MS. HUSEMAN: I can -- did -- sorry, but I'm going to have to turn my --

MR. POWELL-PALM: We've got two more Sunsets.

MS. SMITH: Oh, crap. Sorry, Kim

MS. HUSEMAN: No. No problem. You can skip over them.
MS. SMITH: All the switching really has -- my thing -- my sheet is all wrong. Oh, my gosh. Kim, I'm sorry. Attapulgite and diatomaceous earth.

MS. HUSEMAN: Not to worry. I appreciate everybody working with me and my technical errors of not having power at my house for a while, but I'm back up and going. So we will, yes, so attapulgite.

So attapulgite is under 605 -- or, sorry, 205.605(a) non-synthetic allowed. Attapulgite, as a processing aid in the handling of plant and animal oils. Some of these references will be very similar to bentonite. It seems that there are some crossover applications to where you would use one or another. The written comments that we received -- well, I'll back up here to -- the questions that we had for the stakeholders.

As attapulgite is used as a natural bleaching clay for the purification of vegetable and animal oils. The function of a bleaching clay is to remove undesirable by-products, impurities,
for the vegetable oil and animal fat, thus improving the appearance, flavor, taste, and stability of the final product. Attapulgite is manufactured -- it's a clay which is surface mined by open-pit method, stripping by scrapers, draglines, or bulldozers, and extraction by shovels, backhoes, small draglines, or front-end loaders. The clay is then loaded onto trucks and transported to the processing plant where it's then dried, milled, and sieved to obtain the desirable range of particle sizes.

So we had asked stakeholders for feedback if it's be -- if attapulgite is being used in organic production today; the industries that would be most impacted with its removal from the National List; and then furthering for health concerns from the mining aspect. I wouldn't say that we received much in the way of the questions that we had asked from stakeholders, but it was angled slightly different in the responses that we did receive.

From a certifier standpoint it was
stated that three, at the most, from two different certifiers, have operations that had attapulgite listed. One of the certifying agency made mention to the 2010 TR, where attapulgite notes that some types of the attapulgite require acid activation to achieve the necessary surface area for final use efficacy and some attapulgites are acid activated, which is treated with a sulfuric or hydrochloric acid to enhance it's bleaching activation for using and clarifying edible and non-edible oils.

Non-acid treated attapulgite is appropriately listed under 205.605(a). If the intent is to to allow for acid activated, that should be listed under 205.605(b). Really we only have it listed as 605(a) and which segues into another certifying body, mentioning that they do verify attapulgite if not acid leached, acid activated, or acid treated. So there seems to be maybe some clarity concerns as far as the type of attapulgite being utilized, and if it's being utilized sufficiently under it's correct listing.
It should be an annotation or a second listing.

But then to follow up, based off of other comments from interest groups and also listed in, you know, from certifying bodies, the need for attapulgite to be on the National List and strong support to challenge, wanting to hear more from stakeholders who are utilizing attapulgite, and the necessity where maybe bentonite or kaolin is not sufficient, as those are also listed on the National List and mentioned as possible alternatives to be able to remove a substance.

I would say then -- and just, kind of, to follow that up, based off of some survey results, the material does not meet the essentiality criteria. So I want to challenge that, if that's truly the case, or if there is other stakeholders that, you know, come forward and mention how it is a necessity. But it does seem that in past reviews it may have been passed, maybe not out of necessity, but just out of a lack of support to remove it, more or less. So I want some more stakeholder feedback, if we can get it, and then
similar to bentonite to challenge the acid activated versus not acid activated and see if there's parallels between attapulgite and bentonite. And that's all I have there.

MS. SMITH: Questions for Kim?

Go ahead, Liz.

MS. GRAZNAK: Good day. This is maybe not specific to attapulgite, but being new, could somebody help me better clarify and understand what you're talking about with an (a) versus a (b) listing, like, a first versus a second listing. That is not clear to me.

MS. SMITH: Sure. So on the handling list at 205.605 here, these are all nonag, nonorganic materials that are divided into either synthetic or non-synthetic. And it's a little bit different, like I was saying before, whereas like the crops and livestock lists function just a little bit differently in that all non-synthetics or naturals are allowed -- inherently allowed unless they're prohibited. In which case they would end up on 205.602 for crops or 205.604 for
livestock. And then the opposite is true, where synthetics are prohibited unless they're specifically allowed.

So with the handling list, so to be used in -- as -- in or on organics -- or products labeled as organic, or made with organic they have to be listed in -- like, there's no assumption that they're allowed. And so whenever we -- whenever a material or substance is petitioned, the first vote that we take is to classify the material. And we classify it as synthetic or nonsynthetic. And that's where -- that's then where it gets placed on the list.

However, there have been further instructions and guidances developed along the way that have helped the board, and certifiers, and material review organizations make those determinations. And so those now, like, live in the National Organic Program Handbook, often referred to as the decision tree, right? So there's, like, the ag/nonag decision tree and there's the synthetic/non-synthetic decision
tree. And so that helps the board and others make those classification material -- or classification determinations.

But those didn't exist when the list was first developed. And so there have been times where we didn't get it right, or manufacturing has changed, you know, so that's why we, like, re-uplist TRs every so often. And so there often will, either be through a petition, or our own, like, board work where -- where we will decide that we either want to, like, reclassify a material or, you know, move it around a little bit.

Does that answer your question, Liz? Okay. Any other questions for Kim?

Okay. You want to move to diatomaceous earth.

MS. HUSEMAN: Yes. And thank you for that explanation, Kyla. It was very well said.

MS. SMITH: Thank you.

Yes. And this is just, Jared, an open invitation to, like, if I'm saying anything that is not correct, like, please jump in at any point,
Jared or Andrea, to correct me.

MS. HUSEMAN: That was great.

Okay. So we'll move forward with the final handling Sunset item today which is diatomaceous earth, so specifically listed under 205.605(a) as a nonsynthetic allowed, for food filtration aid only. Diatomaceous earth has several applications, very specifically looking for this -- the food filtering aid. So diatomaceous earth, or also referenced as DE used as a filtering aid in food productions of syrups, juices, beer, beverages, and other products.

Diatomaceous earth is made from the fossilized remains of diatoms. Their skeletons are made of a natural substance called silica. Diatoms accumulate in the sediment of rivers, streams, lakes, and oceans, and is mined in quarries or open pits.

So questions to our stakeholders were, Is the continuing use of DE today -- is there continuing use of DE today in organic production. Have there been any changes in the environmental
issues? And are there alternative filtration aids allowing for the removal of DE on the National List?

Overwhelmingly, from several responses that we received is that the need for diatomaceous earth in the production -- very specifically, the Juice Products Association did comment saying that DE is being used and it's needed and to not get off the list.

That -- Moser also mentioned that it -- from a handling perspective -- although it's mainly used as a pest control in the use of food production it is needed. From a syrup production standpoint there was a four out of five necessity ranked for the ability to produce maple syrup, and the need for diatomaceous earth in that particular arena, you know, for you to be able to remove the insolubles and the impurities, there's a need in the organic states. I do not have any commenters that opposed it to be relisted, so felt like it was pretty straightforward.

That's all I've got, Kyla.

MS. SMITH: Thanks, Kim.
Any questions for Kim on diatomaceous earth?

Okay. Now we are through Sunsets. Thank you for bearing with me fumbling around like that. And now we will move to the proposal on CPC, and I will pass to Wood.

MR. TURNER: Thanks, Kyla.

We have a petition material that is called cetylpyridinium chloride. I will never say that again over the course of this session and I'll call it CPC from here on out, but -- and I want to just preface by saying, I am a torch carrier on this particular petition for our former colleague, Dr. Asa Bradman, who did most of the work on this, prior to his rotating off of the Board. So I hope you will -- you all give me as much generosity in your -- in my non-technical sort of description, my non -- I'm not a doctor, of this material. But it's -- I just want to preface it that way.

So we have a material here that's been petitioned as an antimicrobial processing aid
specifically for application onto poultry or poultry parts at slaughter or processing plants. And it's being petitioned to be listed at 605(b) synthetic, nonagricultural, nonorganic substance allowed in or on processed products labeled as organic or made with organic ingredients. It would be added to water as a drench or dip to reduce populations of foodborne pathogens such as salmonella and compylobacter that may be present on raw poultry.

The proposed listing would indicate, CPC antimicrobial food treatment for use according to FDA limitation. The petition came in -- end of 2019, amended in early 2021. TR was found sufficient -- or was produced and found sufficient in August of '21, and we're moving it forward here today.

There's a few issues that I -- and I know you all have made -- give materials in the comments. Actually, fairly few -- we didn't hear very much from folks in the -- in our oral comments, but there were some -- a significant number of
comments in our written comments. So there's a few issues and I just want to try to summarize them for you.

So one of the most fundamental relates to the fact that what we're talking about here is a material that is in a class of substances referred to as QACs, or quaternary ammonium compounds. And these are, you know, microbicides. We're talking about a material that has -- a set of materials that has sort of risen in prominence, I think, over the course of our confusion, our collective obsession with what to do about COVID-19. And so we've seen a lot of concern and a lot of -- a rise in the use of these materials. They're very powerful materials that are antimicrobial in nature and have -- many have indicated there's a number of, you know, impacts both into human health and to the environment associated from -- associated with QACs.

So I'll say that. There's also a concern in this material that when you apply something like this, that QAC or that material is
going to be -- there will be residues from that material not only on the surfaces, but also on the meat that's being treated with that material.

   Another issue relates to sort of this, I guess, there are two issues that are kind of looming fairly really large, I think, in petitions like this. We have an ongoing -- some of you are aware of this, we have an ongoing process to try to understand where and how we review sanitizers.

   What is the appropriate rotation of sanitizers in Organic? How do we evaluate the sanitizer toolkit? How do we ensure that in Organic we are meeting the expectation that the consumer has, relative to food safety but not doing that indiscriminately, not introducing new materials that are inconsistent with Organic.

   And so this is an important issue and this would be, you know, this petition which would sort of introduce a new sanitizer into the mix. Not necessarily -- it doesn't necessarily suggest -- it's not -- it doesn't necessarily provide any helpful guidance to us on sort of what the right
rotation and what the right review of sanitizers needs to be. It would just be a new sanitizer and an extremely powerful antimicrobial as a result. I'll indicate that we also have another antimicrobial petition in the mix as well. That's on a different timeline from this material. So that's important to consider.

And then perhaps, maybe most important here is the idea that we -- that in order to produce CPC, you have to use a material -- an ancillary or other material called propylene glycol to complete the formulation. And it's outlined -- this process is outlined in full in the TR. I'm not even going to begin to explain it to you, but it does raise important questions because we don't have any guidance in handling reviews -- for how to review materials -- ancillary and other materials like propylene glycol. And so it is a functional requirement -- to be able to use CPC, you have a functional requirement to use propylene glycol. And so this is a complicated issue.

That said, so no clear -- got no clear
pathway on sanitizers. No clear pathway on ancillary or other materials, and how to review them. However, the subcommittee in its discussions believe that for the other reasons that I've articulated related to the use of QACs and the use -- and the residue issue, for example, that we could review this material on the merits outside of those other few considerations. So that's kind of where we are.

So there is a, you know, there -- I won't go through the history of, kind of, the discussion between the NOP and the NOSB. I'm not even sure I fully have internalized it myself in terms of sort of how to understand this other ingredient issue. Only to say that there have been, you know, at least as far back as 2011 and probably further, ongoing discussion back and forth related to how to think about this idea of other materials or ancillary materials. So we're sort of in a situation where we're sort of thinking about ancillary materials like propylene glycol and kind of, I think, accumulating this list of these
materials that are required to sort of move other products forward.

And when the NOP provides guidance to us on how to appropriately review ancillary substances, we can begin -- we can sort of take into consideration how to do that. Again, I don't want to get confused. I don't want to confuse the issue here because I am suggesting that we have a discussion on this material on the merits outside of the ancillary material issue, and outside of sort of the sanitizer reviews. Because I think it has some of the unique considerations that are important, including, I should say, very strong community concern about the material in our written comments, and specifically about this issue of quaternary ammonium compounds, quats, QACs, however you want to refer to them, that are considered to be -- considered to leave persistent residues, and are thought of by non-profit organizations, by certifiers, by individuals who commented to us that they're not consistent with organic principles.
You all have seen these comments as well. I think, you know, we -- you know, it's -- I think it's been unusual in my tenure on the board to see such sort of emphatic language about material as I've seen related to this material. I'm sure there are others -- other examples, but I think people have been shocked to see a material like this come before the Board for consideration. That said, you know, the industry as a whole, suggests that it's a critical material.

One thing that, you know, one thing that I noted, that I've been sort of wrestling with in my brain, is this idea that somehow CPC ensures higher quality meat than other sanitizers. And I have a really hard time with that. I can't quite -- I can't get my head around that. I don't want to get on a soap box about it, but I don't understand that. As a regular consumer of organic poultry, I just don't -- I just can't -- I think we're talking about something that for me almost goes to the same level as sort of the obsession that we see in the marketplace around imperfect food.
I mean, you know, I'll eat your apples any day, Brian, with a spot on them. I don't care. I don't -- I'm not saying that's analogous to this, but I'm suggesting that somehow the food quality statement that I've heard from the industry and some of the comments are overstated. Not to take anything away from the concern about the pathogens we're talking about here. These are important considerations.

And I think if -- I don't want to suggest, I don't want to diminish or minimize in any way kind of a need to ensure food safety for the consumer. On the other hand, at what cost, and what, you know, what do we have to do to provide that? And I'm not at a place myself in this review where I feel like this material is necessary to be able to ensure that. I know there's -- there seems to be some concern from the industry in some of their comments that it's, you know, that I'm wrong on that, but I'll leave that there.

Let me see what else I wanted to add here.
I think that's probably all I want to say for the moment, Kyla, on this. I think we should open it up for discussion and you and I, and others who have been involved in this process with Asa can try to take whatever questions may exist on this, and I'll stumble through them or clumsily try to handle those questions that I can, but that's where I am.

MS. SMITH: Yes. Thank you so much, Wood, for your work on this and taking this over from Asa. I know it was no small task and, like, yes, I 100 percent have your back and will answer the questions as best as we can.

Rick, go ahead.

MR. GREENWOOD: Yes. First of all, Wood, I feel your pain. These are tough issues. And I think there's always this push to have more disinfectants because of generating resistance in microbial organisms. And so the industry wants a lot of choices, so they can use one thing for a while and then switch so they don't do it. My concern with the quats besides the residue is they
have some real limitations and there's a tremendous amount of literature on the fact that, for instance, pseudomonas aeruginosa can grow very nicely in quats.

And I've had real experience with that doing hospital microbiology where they used to disinfect indwelling catheters between patients and ended up giving them pseudomonas because it was growing in the disinfecting solution. So I've never liked it. That's a personal thing because I've seen problems with it and I don't know basically if it's really necessary considering the other choices that we have. I know we're always pushed to add one more, so we have lots of, as everyone says, tools in the toolbox. But I don't know if this is a particularly good one to add.

MS. SMITH: Allison?

MS. JOHNSON: Thanks so much for the overview. It was really easy to follow. And I just wanted to add that when I saw this on our voting list for my first meeting, I was actually kind of relieved, because this one seemed so
straightforward from my certifying days. Quats were the no, no. It's, like, hard line, oh, it's a quat, not allowed. So it seems like a really straightforward decision to me. It's not compatible with the, you know, practices that have been in place for 20 years. And I don't see any reason to add it now.

MS. SMITH: Thanks, Alison.

I'll add too that PCO certifies a decent amount of poultry operations. And to my knowledge, we have not had any operators inquiring about use of CPC or any type of quat as a indirect through contact, as a carcass wash.

Dilip.

MR. NANDWANI: Well, I'll just add a quick comment as I shared on subcommittee, that there are a few reports available in the scientific community which says about these residues on the poultry skin. And also there was a concern having some infection in pulmonary cells in humans as well. There are some good reports available which I had shared. So I just wanted to add that. Thank
you.

MR. TURNER: Thanks, Dilip.

MS. SMITH: Thanks, Dilip.

Logan.

MS. PETREY: Hi. Thank you. This is more directed towards Kyla on follow-up to that certifying poultry places. Have you noticed that there's an issue with sanitizers not working and salmonella breaking either -- or they in trouble and needing something?

MS. SMITH: Not to my knowledge. But I don't know, things sort of only filter up to me when it's dire, like, straits. But I haven't heard anything from, like, our review side, or our inspections team along those lines.

MS. PETREY: Because I was expecting a little bit more, you know, if there was a case, more commenters to say that there was a need. And, Wood, I don't know, I didn't see enough --

MR. TURNER: It was limited.

MS. PETREY: -- the more -- except, probably it came from maybe the producers of the
products, than more so the growers or the producers. So, okay. Thank you.

MS. SMITH: Kim.

MS. HUSEMAN: Yes. Maybe just to follow up on that aspect, both the comment and the question. Stakeholders that I am in contact with have not mentioned a need for additional products in order to safely produce poultry products. And I guess then my question to Wood would be, did you find that there were stakeholder comments, requesting and needing a product such as CPC, in addition to current practices, in order to maintain safe product in the poultry industry?

MR. TURNER: Yes. I think as Logan just alluded to Kim, and I appreciate you asking the question directly, there were, I mean, there were -- there was a comment from a producer suggesting -- a large producer that suggested that it would be beneficial, to use Rick's words, a beneficial addition to the tool kit. But not a flood of comments by any stretch of the imagination. I think the only real comments we
heard in the written comments in support of that were from that one large producer and from the petitioner. So I'm particularly interested in your perspective on that, Kim, so I appreciate you weighing in.

MS. SMITH: Mindee.

MS. JEFFERY: Thanks. I -- in the write up, I really appreciated the emphasis of the -- that CPC is non essential, and that the organic poultry industry is supported by existing materials, and that we are in compliance with food safety standards. And I'm concerned with this notion it -- that the -- it's expected to remove the majority of CPC from treated surfaces, but that CPC residues have been found on poultry skin.

And I got to tell you, this is a customer service nightmare waiting to happen at the good earth because our customers are highly educated.

And if somebody started telling them that there was quats in their chicken skin, they're going to walk up to the meat counter and they're going to ask the first person, which one of these organic
chicken companies that you carry doesn't use quats in their processing? And then we're going to go back and try to split that hair.

And the danger here for me is that, like, long-term titration of consumer investment in organic. And I, like -- I'm a nerd. I love independent natural food retailers and I love co-ops. And I've spent 20 years going around the country, every time I was at a trade show, trying to get into every single one of them I could and, like, walk in and ask harder customer service questions to kind of see where we are with organic education.

And it's a tough one, man. You really have to work hard to get that customer service level, like, real organic enthusiasts, where you get great answers from every person in the store. And this one would really not. And so I really feel strongly that this is a -- this is not something that we can do to customer service in organic land right now. Because if we don't need it in the poultry industry, we certainly don't need...
this question in the customer service interaction.

MR. TURNER: Yes. Yes. Totally.

MR. POWELL-PALM: If we were in person, I could just start clapping right now.

MS. SMITH: That was so good, Mindee.

MR. TURNER: Well said, Mindee. I only have one more point to that. And I -- there will be people -- I mean, I don't want to preempt our vote here, Kyla. But there will be people in the community who will say -- who might say, well, I mean, this is -- CPC is in every mouthwash and toothpaste that we use every single day. And first of all, it's not in every mouthpiece -- mouthwash and toothpaste we use every single day. And second of all, if the FDA says it's safe in mouthwash and toothpaste it doesn't mean it's consistent with organic principles. And I just -- I want to make that distinction really clear. They're not the same thing. And we're not charged with the same mandate. And so we have to represent the point of view that we have here as an organic community on materials like this, so --
MS. SMITH: That's what -- it's, like, 100 percent on the nose.

Rick.

MR. GREENWOOD: Yes. Just one final comment and I think that's what's great about Organic, is that we keep this wall up. And I'll give you the example of aspirin. I don't know how many of you saw that for years they've talked about taking aspirin to prevent heart attacks and physicians do it. And -- what was it, two days ago, suddenly it's said, that's not a good idea. You shouldn't do it. And so I think our plan is to keep all of these things out, so we don't have to come back to people ten years later and say, huh, sorry, you got cancer because we allowed this in. I think that's what people look to for Organic. So I think having a strict line is actually very important.

MS. SMITH: Okay. I'm seeing no more hands, but this is a biggie, so I don't want to rush the time. And we're doing pretty good. So feeling ready to vote?
MR. TURNER: Kyla, can I just say one thing. So well, maybe I'm preempting. Sorry. I wanted to, I guess, clarify, the way we've articulated the motions. Is that appropriate at this point?

MR. GREENWOOD: It definitely is.

MS. SMITH: Sure. Yes. So we'll take two votes, again, like I was describing before.
MR. TURNER: Yes.

MS. SMITH: We have to -- this is a petition material. So it's not a Sunset material.

MR. TURNER: Right.

MS. SMITH: So this material first needs to go through a classification motion. So that's the first motion. It's on the screen. And both of these motions come first and seconded out of the subcommittee so we don't need to redo that, correct? So they just come first and seconded and we don't have to go through the whole motioning process. And so we'll just -- I'll read them into the record as such and then we'll proceed with the vote.

For the National List motion -- and again, I'm going to try -- I don't want to confuse everybody. So because -- but this will be, in the fall when we're having to vote on Sunsets, a little bit more complicated because we are sort of having to flip back-and-forth with your yeses and nos. But for this motion, the National List motion, it is to add. And so a no vote would be to not
add. It would not appear on the list. And just
to clarify that there is an annotation as it is
on the screen there, CPC can only be used in
formulation with propylene glycol per FDA
requirements. And so that would be listed. If
it were to pass and be added, that is how it would
be annotated so that propylene glycol would be
allowed in the formulation. Is that all clear?

MR. POWELL-PALM: I think so. So no
close kills it.

MS. SMITH: Correct. Just wanted to
make sure that the annotation part was clear as
well. Okay.

MR. TURNER: I guess the point I want
to -- I guess you're right about that, Nate. I
just want to make sure that it's clear that in no
context, even if there were a yes, even if it
passed, there's no way this material could be used
at all without propylene glycol in the formulation,
which adds another layer to its listing. With --
and another way, if it was -- I'm not saying that
right. I'm not saying that -- are you following me?

MR. POWELL-PALM: I am. Yes. I was just quietly looking at the comments because that was -- that confusion was voiced as well.

MR. TURNER: Oh. It was. I didn't know.

MR. POWELL-PALM: Yes. I think we're landing right. Does anyone else have any questions about this annotation? Are we tracking together, that we're talking about CPC with the propylene glycol as the only space in which it could exist? And then we're going to vote on, does it exist on our National List at all?

MS. SMITH: And our understanding was that, like, it was required to be formulated by FDA with the use of propylene glycol. So they're like a package deal.

MR. POWELL-PALM: Yes.

MS. SMITH: Okay. I'm going to move to the vote.

MR. POWELL-PALM: All right.
MS. SMITH: All right. So first we'll take the -- wait a minute. I got to get my spreadsheet up. I'm, like, doing this in the secretary thing, so --

MR. POWELL-PALM: Totally good. And I can track with you for that. If you and I could -- and I can switch roles with you for a second to take notes.

MS. JEFFERY: I got it.

MS. SMITH: My handy dandy spreadsheet does most of the work for me, so I just wanted to make sure I was up and ready, but thanks for the backups.

Okay. So classification motion first. And the motion -- or the voting will start with Brian.

And so the motion comes first and seconded out of subcommittee. The motion is to classify CPC --

Wood, can you say real name for me.

MR. TURNER: Cetylpyridinium chloride.
MS. SMITH: Thank you.

-- CPC as a nonagricultural synthetic substance. It was motioned by Wood and seconded by Kyla Smith, myself. And the vote starts with Brian and I'll turn it to you, Nate, to call the vote.

MR. POWELL-PALM: Sure.

MS. SMITH: Oh. Wait. I'm sorry.

MR. POWELL-PALM: Go ahead.

MS. SMITH: Any further discussion?

MR. POWELL-PALM: Hearing none.

We'll move to the vote.

Brian, please go ahead.

MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry.

MR. D'AMORE: Yes.

MR. POWELL-PALM: Carolyn.

MS. DIMITRI: Yes.

MR. POWELL-PALM: Rick.

MR. GREENWOOD: Yes.

MR. POWELL-PALM: Liz.

MS. GRAZNAK: Yes.
MR. POWELL-PALM: Kim.
MS. HUSEMAN: Yes.

MR. POWELL-PALM: Mindee.
MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison.
MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip.
MR. NANDWANI: Yes.

MR. POWELL-PALM: Logan.
MS. PETREY: Yes.

MR. POWELL-PALM: Kyla.
MS. SMITH: Yes.

MR. POWELL-PALM: Wood.
MR. TURNER: Yes.

MR. POWELL-PALM: Javier.
MR. ZAMORA: Yes.

MR. POWELL-PALM: And the chair votes yes.

MS. BRUCH: Nate, I also vote yes.

MR. POWELL-PALM: I'm sorry. Did I totally skip you? Please forgive me.

MS. BRUCH: Don't go right around the
other side again.

MR. POWELL-PALM: Oh, yes. I'm sorry.

Yes. You're at the top of --

MS. BRUCH: -- the pack.

MR. POWELL-PALM: I won't make that mistake again. You made us look --

MS. BRUCH: No worries.

MR. POWELL-PALM: Thank you, Amy.

MS. BRUCH: Yes.

MS. SMITH: Okay. So I have 15 yes, 0 no, 0 abstentions, recusals, or absents. So the motion passes.

Okay. The second motion comes first and seconded out of a subcommittee. The motion is to add CPC with the following annotation. CPC can only be used in formulation with propylene glycol per FDA requirements. And it was motioned by Wood and seconded by myself. The voting will start with Jerry. But before that, any further discussion?

MR. POWELL-PALM: Hearing none, we'll go to the vote.
Jerry, please go ahead.

MR. D'AMORE: I vote no.

MR. POWELL-PALM: Carolyn.

MS. DIMITRI: I vote no, also.

MR. POWELL-PALM: Rick.

MR. GREENWOOD: No.

MR. POWELL-PALM: Liz.

MS. GRAZNAK: No.

MR. POWELL-PALM: Kim.

MS. HUSEMAN: No.

MR. POWELL-PALM: Mindee.

MS. JEFFERY: No.

MR. POWELL-PALM: Allison.

MS. JOHNSON: No.

MR. POWELL-PALM: Dilip.

MR. NANDWANI: No.

MR. POWELL-PALM: Logan.

MS. PETREY: No.

MR. POWELL-PALM: Kyla.

MS. SMITH: No.

MR. POWELL-PALM: Wood.

MR. TURNER: No for me.
MR. POWELL-PALM: Javier.

MR. ZAMORA: No.

MR. POWELL-PALM: Amy.

MS. BRUCH: No.

MR. POWELL-PALM: Brian.

MR. CALDWELL: No.

MR. POWELL-PALM: And the chair votes no.

MS. SMITH: Okay. I have 0 yes, 15 no, 0 abstain, recuse, or absent. The motion fails.

MR. POWELL-PALM: All right.

MS. SMITH: Okay. Switching gears. We are going to phosphoric acid and I will be presenting this.

So phosphoric acid was petitioned to expand annotation to also allow in addition to its current allowance of cleaning of food-contact surfaces and equipment, to be used as an acidifier to adjust pH of an extraction solvent to extract antioxidants or other target molecules from lamiaceae plants, provided the amount of acid shall -- used shall not exceed the minimum needed to lower
pH to 2.5. So we asked a few clarifying questions that you can see on the screen there, which we didn't really receive direct answers to in the public comment process.

Most public or most commenters felt like additional information such as the answers to those questions that we posed in the proposal were needed prior to being able to vote on this substance. We do appreciate all the feedback that was provided and we will take this back to subcommittee to do more work. So that is my recommendation, is to actually vote this back to subcommittee. But I'm happy to answer any questions.

Go ahead, Brian.

MR. CALDWELL: Kyla, I just had a question about this. First of all, just so everybody knows, the lamiaceae is the mint family, so that's, you know, that's the kind of plants that they're talking about. But I didn't see any explicit information as to how the extraction was going to actually, you know, what the process was
that involved the phosphoric acid to extract whatever they're extracting from these plants. So that's just -- to me, it was a little bit of a gap. And just to make sure any materials that are used in that extraction, like solvents or whatever, have to -- do they have to be on the National List in some way also? Or are they considered to be just not in -- well anyway, how is that handled, you know, the actual extraction process for this sort of thing?

MS. SMITH: Look at the --

MR. CALDWELL: They talked a lot about how phosphoric acid was extracted from the brew that produces phosphoric acid, but they didn't talk about how, say, you know, a sugar or a -- or some kind of organic acid, or something like that, would be extracted from the mint plants.

MS. SMITH: Yes. I think that that was, like, part of our struggle, yes, was fully understanding --

MR. CALDWELL: Yes.

MS. SMITH: Yes. The exact
functionality as well.

MR. CALDWELL: Very good. Thank you.

MS. SMITH: Any other questions?

MR. POWELL-PALM: Hearing none, do you want to make a motion, Kyla, to send back?

MS. SMITH: Yes. So I will make the motion to send phosphoric acid annotation change proposal back to subcommittee.

MR. POWELL-PALM: And do we have a second?

MS. JEFFERY: I'll second.

MR. POWELL-PALM: All right. So we have a motion to send back to subcommittee. And we're going to start the vote --

MS. SMITH: Nate.

MR. POWELL-PALM: Yes?

MS. SMITH: Sorry. Any further discussion just for -- process-wise?

MR. POWELL-PALM: Yes.

MS. SMITH: Usually there's not but, you know.

MS. PETREY: I'm sorry, Nate, can you
verbalize who made that second I missed that.

MR. POWELL-PALM: Yes. So the motion was made by Kyla, seconded by Mindee.

And we'll start the voting to go back to subcommittee with Carolyn.

MS. DIMITRI: Yes. Let's send it back.

MR. POWELL-PALM: All right. Rick.

MR. GREENWOOD: Yes.

MR. POWELL-PALM: Liz.

MS. GRAZNAK: Yes.

MR. POWELL-PALM: Kim

MS. HUSEMAN: Yes.

MR. POWELL-PALM: Mindee.

MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison.

MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip.

MR. NANDWANI: Yes.

MR. POWELL-PALM: Logan.

MS. PETREY: Yes.

MR. POWELL-PALM: Kyla.
MS. SMITH: Yes.

MR. POWELL-PALM: Wood.

MR. TURNER: Yes.

MR. POWELL-PALM: Javier.

MR. ZAMORA: Yes.

MR. POWELL-PALM: Amy.

MS. BRUCH: Yes.

MR. POWELL-PALM: Brian.

MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry.

MR. D'AMORE: Yes.

MR. POWELL-PALM: And the chair votes yes.

MS. SMITH: I have 15 yes, 0 no, 0 abstain, recuse, or absent. The motion passes.

MR. POWELL-PALM: Very good.

MS. SMITH: Okay that concludes the handling subcommittee report. And I will hand it back to you, Nate.

MR. POWELL-PALM: All right. Thank you, Kyla. That was a lift. So thank you so much for your leadership and everyone's hard work. I
think watching those votes and watching this
deliberation and collaboration is just a beautiful
picture of how this board can work so effectively.

And we're ahead of schedule. So please,
everyone, pat yourselves on the back because that
was a heavy lift and we did it really well.

So we are moving into lunch and we're
about 14 minutes early. After lunch, we're going
to be going to hear a report on the state of organic
seed by Kristina Hubbard, followed by a report from
Mat Ngouajio -- I apologize if I'm getting that
wrong with NIFA. So we'll hear some interesting
updates after lunch and then we'll move into the
materials subcommittee. So I think if it's all
right with everybody, we will just take these 13
minutes to grab an extra bite. All right. So we
will be back at the top of the hour, 2:00 p.m.
Eastern Time. Nope. Sorry. It is 2:00 p.m.
Eastern Time. Let me just -- this is why I don't
try to do the time zones. Michelle, do you have
a slide for -- it will just be the top of the hour,
1 hour and 13 minutes from now.
MS. ARSENAULT: They're working on adjusting the time for the slide, so --

MR. POWELL-PALM: All right. Thank you, everybody.

MS. ARSENAULT: Thanks, Nate.

Thanks, everyone

MR. POWELL-PALM: See you all in a bit.

(Whereupon, the above-entitled matter went off the record at 1:47 p.m. and resumed at 3:00 p.m.)

MR. POWELL-PALM: All right. Here we are. Welcome back, folks. Hope everyone had a good break. To get our afternoon kicked off, we're going to start with a presentation from Kristina Kiki Hubbard with the Organic Seed Alliance. And I always have to give a shout out to my fellow Montanans. So I'm really glad that Kiki can join us today, and we'll have what I hope to be a great discussion around certified organic seed.

So with that, I'll hand it over to you, Kiki.

MS. JEFFERY: Well, just kidding,
Wood, you're handing it over to Mindee to introduce Kiki.

MR. POWELL-PALM: Oh, I apologize. I'm handing over to Mindee.

MS. JEFFERY: And I just called you Wood --

MR. TURNER: And you just called Nate Wood, you can call Nate me. Yes.

MS. JEFFERY: -- so it's even better. What's your name?

MR. POWELL-PALM: Take it out. So please proceed.

MS. JEFFERY: Kiki Hubbard is the director of advocacy and communications for the Organic Seed Alliance. Her work on seed policy spans 20 years in the areas of antitrust, biotechnology, consolidation, intellectual property, and organic regulation. Growing up in Wisconsin and working on an organic farm piqued her interest in sustainable agriculture and environmental justice. She went on to pursue related law and policy issues in Washington DC
before moving to Montana to complete an MS in Environmental Studies. Kiki now leads OSA's federal policy work and manages the State of Organic Seed project, where she has co-authored all three SOS reports, spanning 15 years. She lives in Missoula with her family in a very generous garden. Thank you so much for all your work, Kiki, I really look forward to your presentation.

MS. HUBBARD: Thanks so much, Mindee. Let me share my screen here -- I'll save mine too. All right. Thanks. I'll give you a second. Oh, here we go. I think I've done this enough times. All right. Can everyone see it okay?

Thank you again, Mindee, for the introduction. And I feel really honored to be a part of a meeting to share findings from our State of Organic Seed report. So thanks to the National Organic Program and the NOSB for inviting Organic Seed Alliance to be on the spring agenda. We don't have a lot of time today so I'm going to jump right into it.

But first I just want to share that,
for those of you who aren't familiar with Organic Seed Alliance, we are a mission driven organization that works nationally to ensure that growers have access to the organic seed they need to be successful. And we do this through research, education, and advocacy. I want to quickly also mention that my co-worker, Jared Zystro, who is also a co-author at State of Organic Seed is joining us today and available to answer questions in the chat and provide other information during my presentation. So shout out and thanks to Jared for joining us today. Oops. Excuse me.

So State of Organic Seed is how Organic Seed Alliance monitors the status of organic seed systems in the United States. And by status, I mean everything from how much organic seed organic growers are using, to barriers to sourcing organic seed, as well as how the organic seed regulation is being enforced, and how many public resource dollars are going toward much needed organic plant breeding and other organic seed research initiatives.
So every five years, we release this progress report to answer these and many other questions to help us understand these trends. And to also publish recommendations that serve as an action plan for increasing the organic seed supply, while also fostering seed-growing networks, and policies that aim to decentralize ownership in our seed systems. We know that the dominant conventional seed trade, which is highly consolidated and privatized, is not providing the seed that organic growers need to be successful. And we also know that the benefits of expanding organic seed, both in the field and marketplace, go well beyond simply helping organic producers meet a regulatory requirement.

We believe strongly that the other benefits include ensuring that organic growers have access to organically bred varieties that are especially well adapted to organic production systems and practices, and that are resilient in the face of our changing climate. We know that this will help organic growers be more successful.
when they have plant genetics that are best suited
to their operation. We also know that the benefits
of expanding certified organic production allows
to enjoy the broader benefits of simply expanding
organic agriculture more broadly, including having
fewer synthetic chemical inputs on our food and
in our landscape, thus benefiting the environment
and human health as well.

Our most recent report is our third
update. We now have 15 years worth of data to help
us understand organic seed trends. Again, trends
in organic seed sourcing, organic research
investments, and much more. And our most recent
report includes more data than we have ever
collected before. And I'll give you a snapshot
of some of these methods and the data that we
collected in order to put together our findings
and recommendations.

First we conducted a national survey
of organic producers in partnership with Organic
Farming Research Foundation. And these findings
informed OFRF's national organic research agenda
which I strongly encourage you to check out. And then the seed related questions informed our State of Organic Seed report. We also conducted an in-depth survey of organic seed producers, as well as organic seed companies to better understand their challenges in organic seed production, including how to scale up their production. And we surveyed organic plant breeders in research, as well, to better understand their successes in their research programs as well as ongoing needs and challenges. We surveyed organic certifiers to better understand how they're enforcing the organic seed regulation and what tools and resources they needed to support their role as certifiers.

Some of the seed producers and companies that responded to our survey agreed to an in-depth interview with our team. We also compiled, as we do every five years, a database of public research investments going to organic plant breeding and other organic seed research. And then, finally, we pulled from our friends at
Organic Farming Research Foundation again, poll data from 16 focus groups that they hosted across the country that included more than 100 organic producers. So we have a lot of data.

What did we find? I'm going to start by giving you a few findings from our organic producers survey. Unfortunately, one of our main findings is that most organic producers still use nonorganic seed for at least part, if not all of their operation. As you see here in this graph, the percentage of producers using only organic seed, so 100 percent organic seed on their operation has remained stagnant since we started collecting this data, again, 15 years ago.

By crop type we see that organic seed sourcing has also remained generally stagnant across field crops, cover crops, and forge crops. Here you're looking at the percent of field crop acreage planted to organic seed. We actually saw a decrease in acreage planted to organic seed among field crop growers. The next graph here shows essentially, again, stagnation in forge crop
acreage planted to organic seed. And this last graph shows a similar trend in cover crop acreage.

Now one bright spot is that we found that vegetable producers who grow fewer than 50 acres reported using more organic seed. So this was definitely, again, a bright spot in our data, an improvement in organic seed sourcing. And if you look at this graph, again, this represents vegetable acreage only, you also see that as acreage increases, organic seed usage decreases. And this is very much in line with our 2016 findings. And it's important because we see that the largest producers are still using relatively little organic seed. And of course, this has a big impact on overall organic acreage planted to organic seed.

We also found that fewer producers report that their certifiers are encouraging that they take extra measures to source organic seed, such as going beyond free seed catalogs, conducting variety trials, or at times even contracting organic seed production ahead of the planting
season. What we found is a market decrease in organic producers reporting that their certifier's requesting that they take greater steps to source organic seed.

When we first published State of Organic Seed in 2011, more than 60 percent of organic producers reported that their certifiers made these requests. Our most recent findings show that 35 percent of organic producers report that these requests are being made. And this is important because if we look at our data even more closely, we see that for those producers who report that their certifies request that they take extra steps to source organic seed, they respond accordingly, and report that they increased their organic seed sourcing. And this was true across crop types.

Not surprisingly, variety unavailability remains the top reason for not sourcing organic seed. More than 60 percent of respondents reported this as a significant factor. We saw an increase this time around in our data
in producers reporting that a processor or buyer requirement served as a significant factor in not sourcing organic seed. This time, we saw 30 percent of organic producers responding to our survey saying that this was a significant factor.

We also found that fewer organic producers are saving and/or producing organic seed on their farm. In our last report more than 40 percent of producers were conducting these practices and this decreased to 25 percent of respondents who say that they're either saving or producing seed on their farm. We're encouraged that 40 percent of organic producers responding, say that they're interested in producing organic seed commercially. And this is important when we look at the fact that we need to grow the organic seed supply, we need to expand organic seed production here in the United States, and we need more skilled organic seed producers. So with training and adequate support, we hope that some of these producers within that 40 percent category can integrate organic seed production into their
operations, and in so doing expand the diversity of organic seed available and help fulfill organic seed supply gaps.

Much like we saw in 2016, organic producers understand that organic seed is important to organic integrity. Specifically, the vast majority of respondents believe that organic seed is important to the integrity of organic food, and that varieties bred for organic production will support their success, and that of the broader organic seed industry. Again, this was very much in line with our last report.

I'm going to shift over to our certifier survey and give you a snapshot of these findings as well. In 2020, we conducted a survey of accredited certified agencies and 22 of them responded. Collectively, we estimate that these certifiers represent more than 80 percent of certified organic farms in the United States. A few findings here include that only 16 percent of certifiers believe that organic producers are going beyond free catalogs or sources to find
organic seed. In the words of one certifier, they said, We need to constantly reinforce that the grower needs to do more work to locate or trial organic seed.

We also found that more than half the certifiers responding would like to see more certifier and inspector trainings, that it would be useful to their efforts. Eighty percent would like to see more educational materials and outreach to organic producers, especially in the way of organic seed availability. Eighty-four percent said that access to organic variety trial data is useful.

I want to point out here that a number of certifiers identified the need for a comprehensive organic seed database. A number of these certifiers noted this in the comments of the survey without really even being prompted, and this stood out to us as an ongoing need for the organic community. We also found that our certifier surveyed data backed up a trend that we saw -- or a finding, I should say, from our organic producer
survey, where certifiers also reported that they perceived processor and buyer agreements with contracted organic growers to increasingly be serving as a barrier to sourcing organic seed.

I'm not going to go too deep unto our research investment data. Again, we collected a ton of data on public investments going toward organic plant breeding and other organic seed initiatives. We totaled these investments over the last five years alone to be about $40 million, which is very exciting. This is the largest investment we've seen that we've documented over a five-year span. Much of this funding, not surprisingly, is coming from USDA's Organic Research and Extension Initiative's competitive grant program, the OREI program. We are enjoying more dollars in that program thanks to the last farm bill.

I also want to take this moment to acknowledge that the State of Organic Seed report would not have been possible without the support of an OREI grant that was awarded to both Organic
Farming Research Foundation and Organic Seed Alliance, so that we collect this data and publish our respective reports. So I'm excited that Mat is here with us today from USDA, NIFA, and I just want to thank NIFA for -- publicly for the support. Again, the SOS report would not have been possible without this competitive grant program.

This report also wouldn't have been possible without the support of -- well, let me say this way. We were able to go well beyond the scope of our previous reports and collect much more data because of the support of a SARE grant as well, which was awarded to a PhD candidate, Liza Wood at UC Davis who is also a co-author this report. And I'm sharing this to not only publicly acknowledge the importance of the support, but also to underscore how important these competitive grant programs that fund organic research truly is to supporting the ongoing growth and success of organic seed systems here in the US.

This data, along with data from a number of our surveys, are available for the first time
to the public through an interactive website. Jared, maybe you could pop that link into the chat box. You can search our specific surveys by region, by crop type, and a number of other categories. And we're really excited to be able to make this wealth of knowledge, this wealth of data much more accessible and searchable to the organic community this time around. So please check it out.

So here's the takeaway. We are thrilled to be celebrating the 20th anniversary of the National Organic Program. In the last two decades we have seen tremendous growth in the organic seed supply. We've seen increases in organic plant breeding and research funding. We've seen more resources and trainings to support organic certifiers in their role in enforcing the organic seed requirement. We've also seen a growing understanding, especially among organic producers themselves, an understanding of why organic seed is important, especially to the integrity of the organic label.
And yet our data over the course of these years also shows no meaningful improvement in organic seed sourcing in the absence of regulatory changes. So I'm going to quickly wrap up by just highlighting a few recommendations as they pertain to regulators and certifiers. Not much is changing on its own as organic certifier's shared in our survey. So there may need to be a change in the regulations to move the issue forward. And we couldn't agree more.

I was very happy to hear Dr. Tucker share yesterday that the NOP will be re-evaluating organic seed as a rule making priority given the outpouring of public support to make it a priority. I think this really underscores that the organic community understands well that organic begins with the foundation of organic seed. So this is a top priority for us, that the organic seed regulations should be strengthened per the 2018 NOSB recommendation. We also strongly support the 2019 recommendation from the NOSB to strengthen the organic seed guidance document.
And as our data showed we believe it's time for the NOSB and NOP to revisit and perhaps get creative on ways to hold organic buyers and processors more accountable to the organic seed regulation. We know this is more difficult for buyers and processors who aren't certified organic handlers. But many of these contracted buyers have their hands tied, and we need to ensure that buyers and processors are part of the solution to increasing organic seed usage across the board.

And finally, as I mentioned, a comprehensive organic seed database is still desperately wanted and needed. And finally, ongoing investments in certifier, inspector, and producer trainings, as well as outreach would also, of course, support more consistent enforcement of the organic seed regulation and support increased sourcing of organic seed. We were thrilled to support the development of the NOP's course on organic seed searches for the Integrity Learning Center, the ACA, the Accredited Certifiers Association as -- create best practices. And
we're trying to do our part by developing resources
to help organic growers conduct organic variety
trials and meet that organic seed regulation.

So with that, I'm going to open it up
for questions. Thank you so much.

MR. POWELL-PALM: Thank you so much for
your presentation, Kiki, and your taking the time
to be with us today.

We have a question from Javier.

MR. ZAMORA: Hi, Kiki. Thank you.
Thank you so much for such a beautiful
presentation, and very informative. Something
that I dearly know because I live it every year.

I mean, every time my certifier shows up and says,
how do you go about searching for new organic seeds?
And I always say, you know, three, four companies
that I go with because -- but they don't -- because
they -- that's what I have around.

And you mentioned a bunch of things that
are really, really serious issue in the organic
community. Number one, you said that the last 15
years the usage of organic seed has stayed level,
but the amount producers that are growing organic food has increased -- I don't know how many times. So we have to think of numbers, numbers. Now, you said that there were -- that $40 million were invested in research for seed -- to produce organic seeds. What seeds are we -- is that a research going to?

Because organic producers, we have a really difficult issue finding organic seeds. And I can count with my fingers for a little larger scale -- I'm a mid-size grower, that I can find seeds in the amount that I need. Every single year I have issues. Last year it was green beans, and winter squash, we didn't have any. The year before was also, I guess it was delicata. But anyway, so I really believe that, yes, this Board needs to look into that just because the amount of organic crops has grown exponentially, but the amount of seed doesn't reflect that. Thank you.

MS. HUBBARD: Yes, Javier. Just quickly answer one of your questions. Of the research investments that we documented, that
about 40 million, about 80 percent of those investments are going toward projects focused on organic plant breeding and/or organic variety trials. So helping to collect data -- performance data on how organic varieties perform against conventional or equivalent varieties is one example.

In terms of understanding how much organic seed is out there, we know that you organic seed supply has grown since the program was implemented 20 years ago, simply by looking at the number of organic seed suppliers and the organic seed offerings, based on the data we collect from organic producers' perspectives, as well as organic certifiers' perspectives on how the marketplace has changed. But we desperately need a comprehensive listing of certified organic seed that's available and that's out there. We don't have that, and that will continue to be a barrier, I think, to making quicker progress on growing organic seed systems generally.

MR. POWELL-PALM: Logan has a
question.

MS. PETREY: Thank you. Thank you, Kiki, for the presentation. And so this really isn't supposed to be a reason, you know, to look or not look for organic seed, but the financials of organic seed, I think, is important for farmers.

And maybe the incentive of looking even harder and searching harder and all that, is that looked at in the research of, you know, at least trying to level that playing field. I mean, it obviously, is going to cost more, you know, to produce organic seed with potentially lower yields, you know. So I would imagine it is going to be a hurdle on that.

But I can imagine that for farmers, you know, if they do the following procedures their -- the incentive is, you know, stop there, than going after just so they can pay more for potentially a lesser producing variety or something. So, you know, in the grand scheme of things, it really can affect the farmer, looking at that side.

MS. HUBBARD: It absolute can, Logan.
Thanks for your question. And of course, organic seed isn't always lower yielding, you know, as conventional seed, as I think you implied, which is one of the reasons why this -- these research investments are so important in terms of performance data and breeding to adapt these crop genetics to organic farming systems. In our 2016 report we did provide a snapshot of the price differences between conventional and organic seed. It widely varied. It was far from consistent.

We know that it's more costly to produce organic seed. And this is -- well, let me also say that we do ask about price being a factor in our survey of organic farmers, even though it's not an allowable reason, as we know. My understanding, and Jared correct me if you want to in the chat box, is that this is less of a factor than it used to be -- the price of seed. And as we expand our capacity of organic seed production and offerings, I do believe that price point will come down.

One challenge, of course, in growing
the organic seed supply is that these organic suppliers, these companies who at times have their own organic plant breeding programs, they are taking a financial risk to produce a product that isn't required fully to be used, given the non--given the exemption to use nonorganic seed. And unfortunately what we're seeing as we document a lack of progress in organic seed sourcing among organic producers, is that we're actually seeing some of these organic plant breeding and seed production programs closing. Because it's no longer financially feasible for them to continue to take that risk. And they are losing hope that there will be changes in organic seed usage among organic growers.

And so we are in -- we're at a critical juncture, in my view, to make sure that we are moving a number of solutions forward simultaneously. And again, as I said before, I think mandating continuous improvement in the form of regulation will go a long way to provide confidence to the organic seed production
companies that we're committed as a community to supporting organic growers and enforcing the organic seed requirement.

MS. PETREY: Thank you. And when I was stating yield, I didn't mean that a -- on the farmer's side, I meant on the seed person's side. I can imagine that there's barriers producing that yield the same as conventional seed yield methods.

MS. HUBBARD: Yes. Actually I want to respond to that just quickly, in that only 5 percent of these research dollars have gone toward research projects that support our understanding organic seed production, meaning addressing challenges organic seed producers face in being successful with those seed crops. And so our in-depth survey this time around will hopefully inform future competitive grant programs in this regard. Because we are doing a pretty darn good job of funding organic plant breeding projects. Of course, there's more interest than we have money for even those projects. But we really need to turn more attention toward the needs of organic
seed producers because they face a number of challenges, both production challenges, as well as non-production challenges, that could certainly be addressed through research.

MS. PETREY: Thank you.

MS. HUBBARD: Yes.

MR. POWELL-PALM: Wood has a question for you?

MR. TURNER: Great presentation, Kiki. Thanks so much for being with us today. You know, every slide you presented, I felt like, boy, I wish we had more time because every slide I sort of have a root cause question, like, why is that, why is that. Like, there's five whys every time I saw one of your slides. And so I want to ask you all those questions if we can have a different conversation another time.

But I'm curious about whether any of the research is going into what I would say is sort of capacity building in the grower community. I'm really surprised that there's not more seed saving happening in -- among our organic growers. And
it goes a little bit to Logan's question -- I'm so bold, it may be unrelated in her mind, but I -- to me the cost to growers to buy seed year over year would sort of -- well, to me would suggest that there's a better investment to be made on the growers' side and really understanding how to collect seed, how to manage seed, how to deal with that kind of continued propagation.

And maybe I'm just completely out in left field on his question, but I'm curious. I was surprised -- I'm surprised to think that we're still functioning in -- we have to function in an expensive market for growers for seed. And if that's part of the problem versus better management of seed and building capacity, even for small -- smaller growers even to understand how to collect seed and manage seed and sort of keep it in circulation. So I'm wondering if you could speak to that at all?

MS. HUBBARD: Yes. That's great question, Wood, and it's a nice follow up from my previous answer where the challenges reported by
organic seed producers -- these are also producers who have their own small to mid-scale enterprises of their own, seed companies, and capacity rose to the top. I mean, many of these producers want to scale up but they don't have the capital or appropriate equipment. They don't have data on what the yields will be for particular seed crops so that they can plan accordingly, economically.

Organic Seed Alliance has done a number of trainings and provided a number of resources to support these growers in a number of ways, but we need an influx of investments, in my view, to build the capacity that you just articulated. It's desired, it's needed, and we have so far only essentially supported that capacity building through smaller grants, which truly have been helpful. In fact, at times those smaller grants are what a lot of these seed producers want and need simply to purchase a piece of equipment to help them clean their seed. So I don't know if that's a adequate answer, but there -- this is discussed more fully in the report, so I encourage
you to check it out.

MR. POWELL-PALM: Please go ahead, Amy.

MS. BRUCH: Yes. Sure. Thank you, Nate.

Kiki, thank you so much for your presentation. I just wanted to let you know. I actually I'm an organic seed producer and I'd love to have some additional conversations with you. But I grow seedcorn, and how that worked is, I just had a lot of conversations with some of the seedcorn companies and said, hey, I have an ability to produce organic seedcorn for you. So it is a lot more management, however -- and I think that's the conversation farmers really need to have, is there needs to be an agreement in terms of contractual, to minimize some of the risks that a farmer takes on to produce these seeds, and really have that negotiation take place.

But as a farmer point of view, it's an additional revenue stream that's a little bit more insulated, and can be more insulated, than the
normal production outlets that we have for our crop. So it really can be a win-win, but it does kind of start with a conversation. And corn is different because that needs to be cross pollinated, female and male seeds need to be planted. However, some of the other crops that really Wood was indicating, you know, saving seed, we're doing this in the Midwest. Organic producers are doing it more informally just because I do believe that price is a problem.

I mean, you might not think the retail price looks too much different than the conventional price. However, when you look at something that could be re-used again, let's take, for instance, wheat or oats, the value of those products when we take them to market are pretty low compared to what I would need to turn around and buy them on the shelf for seed. We're talking maybe four, five, six times different. So that price is crazy because it's kind of like the saying that farmers, you know, they purchase retail and sell in wholesale and pay the freight both ways.
You know, there's an opportunity really here for a farmer to have some additional revenue streams to really optimize their input cost just by, you know, internalizing some of the cleaning. The cleaning should not add four to five times extra on these seeds that are just being re-run by industry. So I really think this is a huge opportunity and I do think it starts with industry first. Us farmers, we're raring to go to be able to circulate more seeds in this environment for our fellow farmers.

MS. HUBBARD: Thanks for sharing that, Amy. I would love to chat with you again at another time, but bravo for being engaged in organic seedcorn production. I agree that it can help the price point and can provide that added income to especially diversified operations. We recently published an economic tool kit for seed producers if anyone's interested in learning more about the economics of seed production and how that might work on your farm. So I'll just slide back quickly. Thank you.
MS. BRUCH: Thank you, Kiki.

MR. POWELL-PALM: Thank you, Amy.

Allison, please go ahead.

MS. JOHNSON: Thank you so much, Kiki, and for the additional information in the chat too. This is such a service to the sector and it is really helpful for making our discussion more concrete, I think. The piece that I found most surprising is that buyers are playing such a big role in driving seed decisions, and as we're talking here my wheels are spinning around, consolidation in seed and inputs and now, like, how do buyers fit into that? So I'm curious if you have any more information about who or what types of buyers are setting these requirements for producers. And, you know, the most nefarious scenario that comes to mind is a buyer knowing that a variety is produced only conventionally and could never be found organically, and selecting it for that reason to keep costs down, or because of some sort of relationship with a supplier of seed and inputs. So I'm curious if you have any more kind
of granularity or information to shed on that piece.

MS. HUBBARD: A great question. Thank you so much, Allison. We don't collect names of buyers or processors. I'll say that first and foremost. My understanding is that -- how this works, is that the buyer or processor is dictating that a variety be sourced. And too often that variety isn't available in a certified organic form. And oftentimes quantity is an issue because it's often these larger scale producers who are under contract with these buyers. And other times they are providing the seed directly to their growers.

Now, I believe that there could generally just not be an appropriate variety available in a certified organic form. However, the process shouldn't start -- stop there. There is an opportunity for these companies, for these buyers and processors, to contract organic seed production well in advance of planting season, and contract that directly with organic seed producing
companies that can offer that variety in a
certified organic form, or can demonstrate an
equivalent variety that will do just as well, if
not better. And so, yes, I just want to underscore
your question on this point that I think this is
a real opportunity for making more progress in
increasing the amount of organic seed that is
planted to organic acres. I hope that's helpful.

MS. JOHNSON: Yes. Thank you.

MR. POWELL-PALM: Thank you for the
question, Allison.

Kyla, please go ahead.

MS. SMITH: Kiki, thank you for the
presentation. I know we've -- oh, sorry. I want
to put my hand down, and then I put it back up.

I know we've talked seed many times over
the years. So again, I appreciate the continuing
conversation. I have a couple of questions and
comments, so hopefully I don't go too long. But
number one, I just wanted to say that the additional
resources with the ACA best practices and the
training session in the learning center are super
helpful for certifiers. And hopefully they allow certifiers to gain more confidence in making compliance related decisions. So I -- you know, more tools is good for sure, and those I -- you know, I believe the learning center course is, like, sort of newish. So anyway, hopefully more people are watching that and find it helpful.

I think that for certifiers to, like -- just with the evolution of certification that sometimes we really come up with a data management and data -- like Jenny was talking about, data harmonization problem, and so a lot of this data, like, lives in, like, paper OSPs. And, like, over the years, like, we are -- certifiers are, like, getting more into technology and databases where, like, we will be better equipped to track seed usage over time. So I know that, like, that's been a struggle that PCO has had is, like, oh, we want all this data, and certifiers have all this data, and it's just a matter of getting it off of paper and into something else that is recordable, and trackable, and something that we can monitor. And
it's not something that is not possible, it's just, you know, it takes time.

Sorry. These are just some comments.

I promise I have some questions.

You mentioned that about really wanting a -- or a, you know, people are talking about a comprehensive list of seed -- certified organic seed. And so I'm wondering that, you know, we have the Organic Integrity Database, and so it doesn't seem like that's currently an effective tool. But could it be, like, is there -- does it just need to be updated more frequently, or is there -- is it -- is there stuff -- is there a certain data that's missing from there that doesn't make it effective? Could that be a place where we could capture organic seed?

MS. HUBBARD: You're talking about the Organic Integrity -- like, the USDA's, right?

MS. SMITH: Yes.

MS. HUBBARD: Get it. So would that database provide, though, specific varieties that are available? Are you thinking about the fact
just that it documents organic seed producers? I guess I'm a little confused as to what you perceive it to already provide to certifiers.

MS. SMITH: Yes. I mean, it does list certified organic operations and the products, or crops that they produce. And so if someone is producing, you know, Amy produces seedcorn, right? So, like, on her products list it should say seedcorn. I don't know. I think it's -- I think this is part of something where maybe there is some additional, you know, data harmonization, in that certifiers don't all use taxonomies in the same way. And so maybe -- anyway. And so I don't know. Maybe it's not an effective place, but maybe it could be if we included varieties, for example, or, you know, things like that.

MS. HUBBARD: Absolutely. There's certainly potential for that, Kyla. And now, you know, you're getting my brain churning here. I'll first say that there could be improvements in the documentation of seed crops. There could be changes in that regard that would help out
organizations like ours in collecting data to begin with. It was difficult to know, when we did an organic seed producer survey, who really was a seed producer. So I'm just going to, like, name that and put it on the shelf over there.

But certainly, if there's an opportunity to collaborate with the Program on providing some type of a list using existing data and then expanding off of it, I think that would be huge. And maybe that's one next step that's worth exploring. Unfortunately, the current listing databases that exist have not proven to be reliable in the way of consistently being updated, and we need a reliable tool. And so I'll just stop there and say, I would love to explore that.

MS. SMITH: I mean, I think that that will be an ongoing and continued problem with OID as well. And I know that, like, you know, that is something that the Program is constantly, like, working on with certifiers is more data reporting.

And I understand that there will be some
additional requirements when SOE comes out. So maybe this will exert towards, you know, more frequent updating.

I have one more question if that's okay, Nate.

MR. POWELL-PALM: Please go ahead.

Yes.

MS. SMITH: My other question is, in the learning center course, there was a suggestion where -- because oftentimes, you know, a grower will -- our experience will be, that a grower will be, like, I requested organic seed, and then it showed up and it wasn't organic, right? And so there was, like, the suggestion, well just, like, order earlier. But if everybody just orders earlier then someone's going to be left without organic seed, right? And so I don't know if it's just, like, better communication or something between the seed supplier to be like, hey, we don't have that, like, look elsewhere, so that they know earlier on. So maybe it's, like, earlier on plus better communication or something. I don't know.
I'm just -- was trying to, like, follow that, like, thread when I watched that course. And I was having trouble about, like, well, I don't know if that's effective all the time.

MS. HUBBARD: Yes. I agree with you -- with what you just said. To that point though, I think we could find some ways to create feedback loops so that organic companies and organic producers more broadly, know what the organic seed supply gaps are. And you know, create a system, again, for -- to improve that communication and identify the needs. We hear from organic seed companies who say, hey, should we just send our list to the certifiers so they know that we're here, that we have these varieties? And so they are -- and then, they also communicate, we could produce this organically but we don't know if we should. And so there is this hunger for those communication channels and for those feedback loops. So we should definitely explore those as part of the solution.

MS. SMITH: Yes. Send the list.
Because when we issue non-compliances, we issue -- we have a guidance sheet that's like, hey, you didn't, you know, do your seed search adequately, or enough, whatever -- whatever the violation is, and we have a list that we've sort of put together of seed companies. But, you know, keeping that updated all the time is challenging, and so I do think, yes, being able to provide that out would be helpful. So, yes, send the list.

MS. HUBBARD: Thanks, Kyla.

MR. POWELL-PALM: Dilip, please go ahead.

MR. NANDWANI: Hello, Kiki. This is Dilip. I'm a new board member, so just bear with me.

MS. HUBBARD: Welcome.

MR. NANDWANI: Thank you. Just a quick comment and a simple question follow-up from my fellow board members they have asked you. So first, I'd like to say that it's a nicely presented, a lot of good information in your presentation. And also I wanted to say that my students, they
have attended your OSA conferences since 2015 from Tennessee State University if you recall it in 2016 and '17.

MS. HUBBARD: Great.

MR. NANDWANI: Okay. So my quick comment is that, you know, correct me if I'm wrong, the organic seeds availability since 2001 -- I believe that organic seeds rule came in 2002 or around that time. And from that, almost 20 -- a little bit over 20 years, I would say at least 20 years, organic seed wealth has come long way. Because at that time there were barely any organic seeds were available and maybe not at all, or maybe fewer crops. And in 20 years we have organic seeds in, I don't know exactly, but a lot of, like, vegetables, fruits, and medicinals, and almost all crops -- if I say correctly, but there is still a lot work needs to be done. But in 20 years OSA and other organic seed companies and researchers the work they have done, I really like to applaud that. The organic producers, they are in much, much good shape now and better place. That's just
my initial comment.

My fairly simple question like Wood and Amy, they asked you about the seed saving, you know -- the issue. So my question is that if -- or you or maybe other, they may have answers for this question. The organic seeds if they plant -- or our producers, if they plant and to save seeds; the next generation seeds, do you think will produce the same results, like, in terms of yield, vigor, growth, or maybe resistance to insect pests and diseases because these seeds are hybrid or open pollinated? So I don't know if you have done any research, any reports you have, or from any other seed companies, or anyone has done, you know. So that's all. Thank you.

MS. HUBBARD: Yes. I mean, maybe as you were starting to say, Dilip, if it's a hybrid, probably not. It's not going to grow true to type again, unless it's open pollinated. There -- so that's my quick answer. And Jared, our cagey plant breeder can weigh into in the chat box. I -- it's important to note though, as you you probably know,
growing seed takes a different knowledge base and skill set, than growing, you know, just a food crop -- an edible crop. And so we have -- there's a lot of education and training needed to support organic producers who are interested in doing more seed saving, and organic seed production because it's often not as simple as just saving that seed. There's a lot of decision-making and selection that often goes into it, at least for certain crop types. And so this is an opportunity, and again, a real need.

I would also be remiss in not mentioning that there's also the challenge to supporting organic producers to be more independent with organic seed supply, in the way of intellectual property rights that too often restricts seed saving, or production, or even research. And so that's another challenge that organic producers face. I will quickly flag that we're going to be publishing a resource on intellectual property rights for organic seed producers and independent plant breeders later this year to help them
understand the nuances of those issues and concerns, and provide more guidance so that it doesn't serve as a barrier.

MR. POWELL-PALM: Thank you.

Great question, Dilip.

I have a couple of questions. I'm going to try to keep it brief and then hand it back to Amy.

When we say organic seed production or seed development, I think there are -- there seems to be kind of two things in one bucket here. I'm an organic seed producer as well. I produce organic certified yellow pea seed, certified seed that is also certified organic, and flax seed. And it's very easy. I get conventional registered seed. I grow it out as organic. It goes into the marketplace as certified organic certified seed.

In looking at that, I think that seems to be something that you're sort of hinting at, Kiki, is that supporting that, just the expansion of production of certified organic certified seed is one bucket, and something that we can expand
upon an offer resources to. The other side of actually developing seed under organic plant breeding methods, I guess, could you talk a little bit about the difference between those two, and where you think we should be really focusing our time and resources on advocating for, because they seem to somewhat different.

MS. HUBBARD: Great articulation of the difference, Nate. Like you're saying, we need both and in between the organic plant breeding investments and taking conventional seed and producing it organically, as well as certified seed, that's where the important role of variety trials and ongoing and additional research plays in to identify which crops will do well in an organic operation under organic conditions and in what region. Sometimes you can simply find a conventional variety that immediately seems to perform just as well in organic as a conventional system. But there is growing research that shows that often times that's not the case.

And so that's why that research to
identify which varieties are even worth growing out under organic production systems. And if they're not optimal in organic production systems, would it be easy to select for certain traits and adapt them to those systems? What would that crop improvement project look like? What would it cost? And then the organic plant breeding projects, ideally, are not only helping us to identify which of those varieties do well under organic conditions, but also, actually doing plant breeding projects, developing new varieties that will do especially well under organic conditions. So while we need them all -- we need them all and they're all important and they all fit together to some extent.

And yes, again, we are so thrilled to see more investments from OREI and other programs in this type of research. But we certainly need more, especially when you see how those organic research investments pale in comparison to the research investments going toward conventional agriculture research and projects that don't
benefit organic producers. Oftentimes the research going toward organic production systems also benefits conventional growers. So I'll just stop there.

MR. POWELL-PALM: Thank you. That's really helpful, I appreciate that.

Amy, please go ahead.

MS. BRUCH: Thank you, Kiki, again. Just one question/comment. Question would be, when you are -- when these tests are being conducted, looking at organic production, on these seeds and their fit, is the condition of the soil and the -- just the balance of nutrients, is that one of the attributes that's being considered? Because I do know in a lot of conventional testing when they're doing these seed trials it's, this one performs, this one doesn't, and the rest of the story with a deficiency in the soil maybe isn't necessarily brought to light. And that, as an organic producer, I'm always trying to promote, you know, that it's our ability to grow, manage our soil, manage below ground is then what is
evident above ground. And for me in my operation, I haven't necessarily found that seed is a limiting factor to my yields. It's -- there is this -- another deficiency that I have to address. So I was just, kind of, wondering how the testing works with just soil identification.

MS. HUBBARD: Yes. I can't speak to all the projects in our data set on that specific point, Amy, but what I can say is that I'm familiar with a number of organic plant breeding projects that are absolutely taking into account soil quality in their research decisions -- their selection decisions, the inputs they are providing to the soil, all in order to provide that information to other researchers as well as growers. But I guess I'll just stop there. This is -- I just don't have a lot to go by and this isn't my wheelhouse. But absolutely, some of these plant breeders are looking not only at soil quality, but the interactions between soil microorganisms and the plants as part of their organic plant breeding goals. It's pretty
fascinating, and I'd be happy to follow up with
some specific projects if you'd like.

MS. BRUCH: Yes. Absolutely. Thank
you.

MR. POWELL-PALM: Thank you, Kiki.
Thank you for taking all of those questions. That
was wonderful. And I think --

MS. HUBBARD: My pleasure.

MR. POWELL-PALM: As you can see, we're
very interested. So many thanks today. I'm sure
-- our members have your contact information, so
I'm sure we'll be following up with additional
questions. But thank you for taking the time and
letting us run along with your time today. We
appreciate it.

MS. HUBBARD: Thank you so much. It
was truly an honor. My pleasure. Have a good
meeting.

MR. POWELL-PALM: Thank you, and take
care.

Next up. We have Mat with NIFA. And
Carolyn, I think, is going to give an introduction.
MS. DIMITRI: Yes.

Welcome, Mat. I will say, Dilip probably knows this, like, one of the happiest days in your life is when Mat actually picks up the phone and calls you because it means he is giving you good news. So Dr. Mat --

Oh, wait a minute. I'm practicing your name 100 times. I'm sorry.

-- Ngouajio --

I was doing it a lot better before I was online. Sorry.

-- is the National Science Liaison for Plant Systems and Organic Farming at the National Institute of Food and Agriculture, also known NIFA. Prior to this position he served as the national program leader from 2013 to 2019 in the Institute of Food Production and Sustainability, where he administered competitive grant programs, including the organic transitions and the Organic Agriculture Research and Extension Initiative, the O-R-E-I, and the Agriculture and Food Research Initiative, AFRI. Prior to joining NIFA, he was
professor in the Department of Horticulture at Michigan State University with a research and extension appointment. He is a fellow of the American Society for Horticultural Science and past president of the American Society for Horticultural Science. He represents NIFA primarily regarding programs related to plant systems, as well as organic farming. So in addition to all of these amazing things that Mat has done, he's also a wonderful colleague and collaborator to those of us who have been working in the field of organic research for many years.

So welcome, Mat. Nice to see you.

MR. NGOUAJIO: Thank you, Carolyn.

Thank you so much.

And thank you, Michelle, for giving me the opportunity to present here today, and it is always a pleasure to come here and give you this update.

Now, like you said Caroline, I have been serving at NIFA for the last three years now since we moved to Kansas City as a national science
liaison, focusing more on plant systems, but more importantly on organic farming, and that's why I am here today. So I will see if I can share my screen here with you and give you a little bit of update. Before I get to that also, I would say thanks to Kiki for an excellent presentation. I really enjoy it. And thank also for acknowledging support from NIFA for some of the work that we have gone in the area of plant breeding.

Okay. Before I continue here, can you see my screen? Okay. I see. Perfect.

So we all know that we have made a lot of progress in term of advancing organic agriculture in the whole country. However, for us to sustain that type of investment, we need enough support from both the private sector and from government. And NIFA has had -- made some of -- seen some of the gaps and stimulate some cutting edge research to address some of the critical needs of the organic industry. But I just wanted also to let you know that most of our programs here at NIFA -- and thanks to
initiative of many of you, we have included a language on organic agriculture on most of our programs. So even if the program is not specific to organic, they do actually accept organic agriculture research projects. And these include both capacity and competitive programs.

But on top of that, we have these two specific programs uniquely designed to address the need of the organic industry. One is the Organic Transitions that we usually refer to that as the O-R-G program, and our largest program, which is the Organic Agriculture Research and Extension Initiative, O-R-E-I. So those two programs cover all types of production systems, all the way from open fields to indoor controlled environments. They cover both animal and plant systems and they support projects that will span the entire supply chain. So this is one of those very few programs that would cover everything that you can think of in the area of organic agriculture.

So just to show those two programs. The Organic Transition Program is our smallest
program. This year, 2022, we are receiving $7.5 million for that program. And the focus of that is usually to address the need of those farmers that are adopting, or that are transitioning from conventional to organic production practices. It's a small program, but also the eligibility to submit proposal is limited to only colleges and universities.

The second program which is the largest one, OREI. This year we -- in 2022 we have 30 million for that program. And the main focus there is to address the need of those people -- of those farmers in the industry that have already adopted the organic standards. And this is a very broad program. Like we always say, pretty much any citizen -- US citizen can apply for that program. So very broad eligibility.

And we usually ask, you know, what are the priorities of those two programs, and how do you separate the two of them? And as you can see on this graph, the two program kind of overlap significantly when it comes to issues like
production efficiency, when it comes to profitability, and to competitiveness of the organic industry. Those two -- we'll be addressing those key issues. However, to make sure that those two program are separate enough, again, for Congress to continue to give us support for those two, rather than just killing one and keeping one, we try to keep some of the priorities really separate.

For OREI we are focusing here on studies that focus on on-farm. A lot of emphasis on OREI is on on-farm studies. That is also where we are funding anything related to educational tools, all the post-harvest, most of the research on seed and breeding, IPM. We also include a curriculum development since the 2014 Farm Bill in this specific program.

On the other side, when we looked at the ORG, we tend to focus more on aspect like ecosystems services, you know, on soil quality, pollinator biodiversity, carbon sequestration, and all the work on modeling to better understand
the impact of organic production systems, we also
tend to fund those through the Organic Transitions.
And whenever we have any new National Organic
Program priorities, let's say a case like
antibiotics that were discontinued, or research
on things like methionine, we tend to also put those
in the organic transitions priorities. And if you
look at our Request For Application, RFAs, you will
see more details there. And this is again, the
type project that we fund with those two program.

For OREI, that's the biggest program,
we have three different types of integrated
projects. Integrated project are those that
include research as a requirement, plus education,
or extension, or all three component. That's why
we call integrated project. We have the Tier 1
project that can fund, you know, proposal up to the
$3 million a piece. The Tier 2 can fund up to 1.5,
and Tier 3 project is up to 750,000. And we design
all those different type based on input from our
stakeholders. You know, they wanted to see
smaller project for some of the institution that
were not very competitive. Because when everything was just one type of project, the most competitive institution tend to be the only one that were really successful.

We are -- since 2014, like I said, we have also included a proposal type called curriculum development because the industry also told us that they wanted to see more education, more students involved in organic agriculture. And we have been very successful but not to the point that we are happy. We would like to see more proposals submitted under that category to develop more new programs, certificate programs, or degree programs, focusing on organic agriculture. And this is one of the few program within NIFA where we continue to fund conference proposal, but more importantly, planning grants.

So a conference like this one or any other conference where people want to get together to talk about organic agriculture, design priorities, or share information with the industry, we can fund up to 50,000 which is pretty
good. And also, people can get together to start
thinking about new ideas, forming teams and putting
together proposals. So we can provide up to 50,000
for those planning grants.

And the Organic Transition, we only
have one type of project which is the standard
project for up to 750,000. That is a small
program, so we didn't want to cut it into so many
small pieces. And as you all know, we all know
the issues that the organic industry is facing a
lot and they span the entire supply chain. So to
address those issues, we really need a true
partnership to identify what the issues are or what
the most pressing issues are. And the NOSB, we
see you as our key partner.

We usually think of our partner in two
groups, some that we call stakeholders and some
that we call partners that we work with, you know,
to address the need of our industry. So we look
at NOSB as being a partner that we work together
with to address those needs. And we also use a
lot of the farming language there. We use the
surveys like the one that Kiki was talking about.

Every listening session that is organized by any of our partners or stakeholders, we use that -- we take that into account. And what do we do with that, is we listen to what our partners are telling us. They help us in those issue identifications.

They help us set priorities, and they also help us work with both USDA and Congress. And the benefit of that is, they have secure support for this industry for funding for research, education, and extension.

And we have also been very lucky because your work was also well received by Congress. What this industry has done over time since we started with this program in 2004, Congress has really responded by really providing the support that NOSB and any other partner has asked. And you look at, starting next year, OREI alone, the budget will go to above 50 million. So that's a big win for the work that this industry has done.

Also, what do we do when we receive that type of support? So within NIFA, we listen to all
the input, we take all the input from industry and
we translate that into what we call the Request
For Applications. Then we make sure that we use
a very strict panel review process to look at all
the applications that we receive for our programs.
And we only base our review on scientific merits.
That's what we use for the selection of the project
that we fund. And after selection of those
projects, we also make sure we follow up with our
applicant to make sure they are delivering what
they promised to do.

Now, you will ask me if -- or every year
you meet, you spend a lot of time, a lot of effort
developing your own priorities for NOSB, what do
we do with those priorities? I would just tell
you that NOSB priorities become our priorities.
So each year -- and thanks to Michelle and all
the folks that keep us in the loop, once they'll
get published, we take them and then they become
also our priority. We include them in our RFAs,
both the Organic Transitions and OREI program.
We have been doing that for the last couple of
years. And it would be very difficult to take your
priorities and try to go and narrow them down to
one or two. So what we do is we put a direct link
to all those priorities in our RFAs. The couple
of the first years, it wasn't very easy because
everything that we do, we have to justify it through
the review process of our RFAs specially with our
policy folks. So today, they can accept to put
those links in those RFAs directly.

Now, what are the implications? Every
single dollar that is appropriated for organic
research, we want to make sure that that money is
spent on organic agriculture and it is spent on
the most important issues of that industry. We
received a lot of projects where you can clearly
tell that, you know, it was a conventional
research. They just added the would organic just
so that it could fit the program. So we want to
make sure that all projects submitted to us are
relevant to the industry. And how do we establish
that relevance?

We establish that relevance by asking
our applicant to clearly demonstrate that their research is addressing key priorities of the industry. So by having NOSB link -- priority linked to our RFAs, they are used by our applicants to establish that relevance to show that this is really addressing a need of this industry. So I'm just giving here an example of how our applicant community is responding to those priorities. I've put here in this box verbatim a language from one of the applications, and this is an ongoing award.

And they put in their application right at the beginning, This project addresses three NOSB research priorities, and then they listed them: Organic alternative systems; side-by-side trial of organic materials and culture methods; and three, production and yield area to transitioning to organic production. So you see that the applicant community is really taking that very seriously and they are using that to establish that relevance. And that is what pushed the project really high on the list.

Now, we also have had some questions
about, should we be ranking some of these priorities to put, like, number 1, number 2? I would say even within NIFA, we usually do not rank our priorities because it would have no impact on our peer review system. And sometimes we ask people to -- we use bullets, which is a lot easier than just using a numerical system 1, 2, 3. So our focus in our peer review panel is really, once the relevance is established, most of the focus is on scientific and technical merit of the proposals.

So I'm just going to move here and show you a bit of data that those two programs have become quickly established as national programs. This shows the number of proposal received by every state. And you can see pretty much we received proposal from every state and territories. Obviously, you know, most of them are focused in the north central, north east and then the west coast, with Texas and Florida also submitting a lot of proposal. And when I show you the next graph, which is the number of proposal
funded, it would show the exact same pattern.

And this have the number of proposals funded for this program. And the state in pink, and I would say North Dakota was last year -- they received an award last year, those are the state that have not yet received an award from us. And there are very few of them. I think last year, North -- in 2021, North Dakota received their first award, and Oklahoma also received their first awards. So very soon, pretty much every single state in the country will have received funding to do organic research.

And another question that we receive a lot is about the success rate of our two programs. They are pretty different between OREI here in blue, and ORG in green. Like I told you, OREI is open to everyone. That's probably the reason why the success rate tend to be smaller. It ranges here between 8 percent and about 30 percent in a good year. ORG, the Organic Transition on the other hand, tend to be higher in term of success rate. Like, just look at 2021 here. We have 61
percent success rate for that program, and part
of it is because, again, not very few people are
eligible, only universities can apply. So there's
a lot that we can do to increase the number of
proposal there. But look at here, OREI, very low
as a success rate.

Now, a couple of dealer, also some good
news is when I started at NIFA in 2013 we have a
couple of issues at that time based on some of the
surveys that were done nationally. One was, we
needed to see more animal systems proposals. We
wanted to see more proposal from small and minority
serving institutions. And at that time there were
very few projects funded in the south. And over
time we have made significant increase in all those
three bullets. We are seeing more proposal for
animal system not only submitted, but also funded.

Same thing for small and minority serving
institution and in the southern region.

Kiki was talking about plant breeding.

Yes. The same thing was true here. We wanted
to see more seed and breed proposals. Look at this
graph there. When I'm looking at the success rate, what you have there in green will be the success rate of the entire program. And then in blue will be the success rate of the seed and breed project.

2014 we have 23 percent for the seed project and the entire program was 27 percent. So the seed and breed project were not very successful with the program.

What we did was, again, we are only funding project based on scientific merit. We rely a lot on you and the industry to send the word out. We did a lot of craftsmanship seminars and we are very happy to see that since that time, all the breeding project are more successful with our programs. Look at here, since 2015, all the breeding project are more successful. And 2021, we have 44 percent success rate for the breeding project compared to 23 for the rest of the program.

So that's another place where we noticed that there was a need and we've made a significant effort through you, through all our stakeholders, to really bring together the best mind so that they
can put together compelling and competitive projects.

So some areas where the news is not that great is, we have just closed the 2022 grant cycle. So all our applications are in for OREI and ORG. For OREI, we saw a significant drop in the number of application, even though the total budget of the program has increased, we are seeing this year 40 percent drop in the total number of applications for OREI, and 50 percent drop in the total number of application for the Organic Transitions for the last two years.

Now, why? We were just scratching our head and asking, is this some side effects of COVID? We also noticed that a lot of project director that have active awards were, all of them, asking for no-cost extension, meaning that they are struggling to complete their field work and they wanted extra time to get it done. Probably they did not have the time to put in -- together new applications. So this is something that we need -- we are going to be working on, making sure that
as our budget increase significantly, that we work with our industry, our -- all our partners and stakeholder, to increase the number of applications because we went to make sure that we are only funding the best scientists.

So again, here you saw a budget of OREI increasing to 50 million. So we need to follow that with, you know, taking advantage of that to stimulate the research and innovation and to tackle some of the big issue that the industry is currently facing. And looking to the future, again, we are going to keep our three leg of the stool, you know, which is research and innovation; extension is the key component of our program; and education training of the next generation of research leader will also continue to be -- it's one -- it's our weakest leg right now, the education component, but we will try continue to work on that.

We will also continue to work with you all to promote the two programs. So if anyone has a meeting somewhere and wanted us to come and give a talk on the two programs to really stimulate the
applicant community and get more solid applications for this program, we would be ready to come anytime. We want to also work within NIFA to continue to include the language on organic research in other programs. We also thought that maybe we, that was the reason why we getting fewer applications because most people can see other opportunities with other program, like beginning farmers. I manage another AFRI program where I am funding many organic project. So we would continue to do that.

And also we want to -- we are very excited that we are being evaluated. Our program is being evaluated by an external evaluator, the Organic Farming Research Foundation, so that maybe one or two years from now, they would come with some findings, some ways we can all together improve those two programs. So this is our entire team. It is myself, Mat --

Carolyn, you did a great job of pronouncing my last name. Many of my colleagues -- many of my colleagues have that problem.
MR. NGOUAJIO: So myself, Mat Ngouajio.

MS. DIMITRI: Thank you.

MR. NGOUAJIO: Yes. I have -- look at the plant part of the organic system. I'm the overall lead for the program. But I do have my colleague, Steve Smith, who is from the animal systems division. And we have Neerja, who's our program specialist. Since organic touches on everything plant and animal, you also see there too, division director, Susan Moser from plant system and Bob Godfrey from animal systems. So those are the two division director that I work with for these organic programs.

So -- okay. Yes. We are asked to always show this slide to show that -- the nondiscrimination statement for USDA. I think since you are going to have a copy of the slide, I will not go through and read all this now. With that, I think I will stop here and take any question that you may have. And I will also stop sharing my screen. I'm coming back to you, Kyla. And I'm
happy I did all of this without having any problem
with my internet.

MS. DIMITRI: The internet guides --
Gods are shining on you.

Nate, do you want to do the questioning
--

MR. POWELL-PALM: Sure.

MR. NGOUAJIO: -- or do you want me to
go for it?

MR. POWELL-PALM: Thank you again, Dr.
Ngouajio. This was just fantastic. I know we're
going to bombard you with questions now. So buckle
up because this is really exciting to see all this.
We're going to start off with Wood.

Wood, please go ahead.

MR. TURNER: Thanks, Mat. Great
presentation. I really appreciate it. And I know
we've been -- you presented to us fairly recently
before and I know we're -- we continue to sort of
say, hey, come tell us more about how this process
is working and how the research priorities that
are coming out of our Board are, you know, really
coming to fruition or sort of making a difference. And I think that's really on the minds of all of us as a group to try to figure out how this process really works. Because I think in some ways, we all come onto this Board and end up inheriting a process. And that's certainly true of research priorities where we sort of, you know, produce these research priorities and they seem to be rolling over year over year.

And the question has been coming up among this group in particular, you know, what is the impact? And so yeah, I think you did a great job of sort of explaining that. And I guess, one thing that will be helpful for me to understand, certainly as we're eating into our time to discuss our discussion document on research priorities today -- with good reason because it was great to have your presentation.

But the question I'm curious about is, can we do a better job of articulating -- and I get the point about ranking the priorities and that's not useful to you, but the idea of
articulating what the priorities really are trying
to get at. Because I think even there's confusion
within the community sometimes about that. We'll
have a summary document, but then a much deeper
document that articulates some of the things that
are associated with it. And I just want to make
sure that somehow the objective or the -- there's
clarity into what we're seeking to really
understand. Because I think sometimes there's
some -- they can be fairly general, and I want to
make sure that that's -- just get some guidance
from you on that.

And the second point that I want to ask
about ORG in particular -- and we hear a lot from
the community about resources, improving resources
to farmers who are trying to transition to organic.
And I hear when you talk about ORG and the fact
that those grants only go to colleges and
universities, it makes me worried that the folks
who need them the most, the growers themselves,
are actually too far removed from that college and
university aspect of that -- of the grant to be
able to really benefit from it.

And so I just -- I'm sort of imagining, having read a lot of comments over the last several weeks, I'm just sort of imagining what's on the minds of people who sort of wonder, like, how did this -- and that's a small program, that's a very small program compared to the other program. So how is that funding directly affecting those growers? Sorry for the long question, but I did want to give you -- it's a lot of context, but sort of having you here today, I appreciate it.

MR. NGOUAJIO: Thank you, Wood. A very good comment there for both ORG and your priorities. Let me began with the ORG program.

To be honest, even us, when I first got to NIFA, I said, man, this is the Organic Transition. So we -- this is a program where we should be getting more farmers involved. But then when you realize that Congress -- they throw our program out in bucket,. Some of them -- every one comes with a prescription, and the organic transition program, just like many other programs that we have, the
IPM program and some other -- methyl bromide, my other program, they come with a strict prescription because they came under the umbrella of what they call integrated project programs.

And when they say integrated programs means that you need research, education, and extension. Once -- who can offer those three things? Only land-grant institutions. So even ARS cannot compete for that program. ARS cannot submit a project to Organic Transition. However, we have language, that came from the industry that this did want to see farmers involved in those projects. That is so important to us. In this we still required to either work with a field that is already certified, or that will be certified by the end of the study. Because we noticed also there were so many project funded with the Organic Transitions at the beginning of the program and then once the project was finished, everything was done.

So we are putting a requirement now, that you need to certify that piece of land. And
what's the best way to do it? Work with a farmer that at the end of the project that farmer would certify that piece of land. So it's still a weakness really, I would say, for our programs to not have people from industry like Kiki, the Organic Seed Alliance, many other farmer that can submit application directly. They have right now to go through a university. So if you want to compete for that program, you need to find a university and then be a SOP award for that university. And your budget should be less than 50 percent of the entire project. So that's an issue that you know, comes with -- we only need to change the law if we went to change that. So that's a small weakness, but still, we are happy to have that program still in the books.

Now, when it comes to priorities, I would say personally, I think the way you present them in term of giving a summary, and then followed by a more in-depth discussion of what you really intend to be achieved, that is still the best way to do it. One, we are facing a significant problem
with this industry in terms of researchers. We can express those needs. We can say we want to see more methodology in research. We want to see more of soil health. But still we need the people outside -- out there, the researcher, that are specialized in those field, or that would be attracted to engage in those field. And as we speak right now we don't have the luxury of that number. So to me, let's keep it broad. Whoever we can grant, we will say thanks for that. Because if we keep it too narrow, we will be again trying to narrow a community that is already too small. I don't know if I -- I've covered that, Wood. Thank you.

MR. POWELL-PALM: Thank you. Next up is going to be Amy.

MS. BRUCH: Thanks, Nate.

Thank you, Dr. Ngouajio. Very interesting insights on research. I have a question for you, just if you could provide some additional information on that feed-back loop for results. So you talked a lot about, you know, the
process for application, and who's applying, and what, maybe, the focus is. I was just curious. Status updates, how results are communicated, and if somebody -- if an awardee does take up one of the NOSB research priorities, is there a way for any interaction between, maybe, our group potentially and what that person is real-time researching?

MR. NGOUAJIO: Okay. Thanks, Amy. That's a great question about, you know, once the research has been funded, you know, what's, how do you close that loop, make sure that they stay connected with the industry and those other people working in that field. We were doing a lot of what we call the project director's meeting where we'd get -- all the people that are funded, get together maybe once every year to share their research results. But unfortunately, with two things, us moving to Kansas City, and second, COVID, we have not done any of those three things.

We lost so many of our staff, about 80 percent of our staff. And one of the things to
cut at that time was we -- no more project director meeting, nothing else, just focus on the basics, what we can do to get the money out of the door.

So we will do a little bit more of that now that we are back fully staffed. And another thing that also happened is, we -- most of our project are funded as a grant. So meaning that the -- you have that, what is called the minimum reporting requirement. And we have to actually sometime -- I'm rejecting more annual report than I used to do, because you see people giving you five sentences for a project of $2 million because that's all that the government requires, you know.

It's not like when you do a cooperative agreement, you can ask for more. It's, like, not the SARE program, when you get a project funded through the SARE program because those are -- most of them are cooperative agreement. They can ask for extra reporting. But most of our grant, we do not have that opportunity. So the best way for us to get more is to get those project directors together with industry to share their result and
usually when we convene those meetings, we get more
from those project directors.

But you are -- it's a very important
point, Amy, because it's -- if the research is done
and the only output is waiting for a scientific
publication that -- most of that is not go into
go to the hands of the industry right away. It
may take five to ten years to get to that scientific
publication, when we actually need to have that
feedback on a continuous basis. So, thanks.

MS. BRUCH: Thank you.

MR. POWELL-PALM: Dilip, please go
ahead.

MR. NANDWANI: Okay. Good afternoon,
Dr. Ngouajio, and good to see you again over the
institute's connection. Although I have attended
your presentations in the past in American Society,
but this was really a very good update on what's
been happening past few yes, especially we are
going out from the COVID. And as I noticed in
others that there was a drop in the applications
and that there is a increase in funding.
Couple of -- kind of one is quick simple question and maybe a clarification. You know I'm with TSU and it's a 1890 institution, and you did mention that there are some -- within OREI and ORG, you have some preference or -- where you do see that proposals are coming from minority institutions. But what other programs in AFRI which you are also program leader, do you see there -- is there any specific programs for those institutions? And part of that question is also, the research priorities you have mentioned from NOSB to -- in OREI, are they also the same when proposals being submitted in AFRI and other USDA programs, or is there any update or changes in those research priorities?

And second quick question I have, these ORG proposals, can they be conducted on certified organic operations? My understanding is that, yes, but I'm not sure, or it has to be only the transitional growers. Thank you.

MR. NGOUAJIO: Okay. And thanks, Dilip. Thank you for seeing you again today, and
hopefully, we will -- I will you see you again at
ASHS meeting. So well, for the ORG program, we
really want most of the research to be done in
certified organic facilities. And, like I said,
it's based on the past. Many people, I mean, I
was -- back in 2001 I was a postdoc. We received
one of the first ORG projects back in 2001. There
were three funded that year out of four projects
submitted. And our team received one, made me
receive one. When you go back and look at all those
projects, everything was shut down at the
completion of the funding. So and the industry
told us, no, we cannot continue to give out money
and not get any results. We want to grow the
organic community. That is part of the reason why
we are supporting funding for those programs.

So that's why we put a requirement that
even if it's not certified organic at least tell
that you are documenting everything so that you
can be certified by the end of the three years of
your project. So that is what we are doing now
because again if we just say certification is not
a requirement, I can guarantee you much of that research is going to be done in conventional system that would take a piece of land, just do the research. After three years, that would be done, they would move to something else. So it's -- it's kind of limiting the number of application that we can get. But we ask this thing to make sure that we are using organic money to support the organic industry. That is probably still the best way to proceed.

Now, in term of priorities for our organic -- other program at AFRI I have an AFRI program that I manage. That is called Foundational Knowledge of Agricultural Production Systems. It's a new program that we started in 2016. And that is the program where we fund a lot of organic projects. Maybe because I was the one who have started that program I made sure that there was enough language there to allow for organic research. But I would say the priorities for AFRI are usually more broad. So if you're looking for an AFRI program don't -- check with the program
managers to see that your ideas would fit.

   We tend to keep them really broad, because each time we try to narrow down things, we get so many people or communities that would come to NIFA and complain and say, why is this project focusing only on this topic? So to avoid all that, you will see it's true for many of our program, we keep the door wide open as much as we can. And that has been the message that I convey to the community. Don't look for the word organic in a program to know that you can compete in that program. And I will tell you, in that AFRI programs the success rate of organic programs, there is higher than OREI. And we have even funded conferences through that AFRI program.

   So the key word there, if a program you see the type of research that is doing there could fit in what you are doing, just check with the program manager and you probably would be able to submit. And those program also offer an extra layer of flexibility that, Dilip, you know -- the organic industry told us because we really listen
closely to what NOSB say, or the Organic Seed Alliance, they told us that they don't want to see a bunch of research conducted with OREI money, or organic transition money comparing organic and conventional.

And indeed, when you look at the early projects, it was comparing organic tomatoes and convention tomato, comparing organic corn and conventional corn. Those were first project that were being funded. The industry told us, that doesn't advance our industry, showing us that organic doesn't yield as much us conventional doesn't help us. We don't want to see that anymore. So we don't fund those type of studies anymore within OREI. However, you can still, if you make a case, in other AFRI program, to do some sort of comparison studies. So it's a lot tougher within OREI. So those AFRI program have -- offer more flexibilities.

MR. NANDWANI: Thank you. You have answered very well and thoughtfully and I'll see in Chicago for ASHS. Thanks again.
MR. NGOUAJIO: Thanks.

MR. POWELL-PALM: Allison, please go ahead.

MS. JOHNSON: Thank you so much, Dr. Ngouajio. This has been really interesting. And I appreciate how much time, it's clear, you're putting into thinking through fairness and making the biggest impact investments with our limited research dollars. I've been working for a number of years on the proposal for a comprehensive organic transition program that would be particularly aimed at supporting small and mid-sized producers, and that would bring together flexible resources that could meet a wide range of needs, including on-farm research.

And part of our motivation in pursuing this is trying to address concerns that I've heard about it being complicated to figure out how to access resources, each program having different requirements, it being time-consuming to apply, and so on. And your observation about the dropping application rates and some of the other related
programs that producers maybe using, made me wonder about this participation issue. So I'm curious, if you had the chance to design something new, how do you think we could make it easier for more producers to access research funding and improve coordination between ORG, OREI and some of the other arms of USDA that support organic?

MR. NGOUAJIO: Wow. That's a tough one, that I -- if I had the same question, I would be asking, you know, going back to the industry, OFRS, Organic Seed Alliance and say, hey, guys, help me here. How can we get this done?

But just to answer your question, I would think that if we went to get more grower involved, it is just to continue to do some of what we have heard from the industry in putting in our RFA that requirement to make sure that each project has a grower component to make it relevant and adapted right away. And we have been doing that, and we are lucky that a lot of people that serve on our panel, people like yourself, many of them, they see that need, the need for getting not only
farmers, but industry folks that are working directly with those farmers involved in the research that we do. That will continue to be a requirement, and that is one -- to my knowledge and my experience just sitting in panel, it makes the project more competitive. There's no project that we fund in our program, if you don't have a grower component. It is really tough to go across that funding line for most of the projects that we fund.

So now, how can we better do that? I don't think the way the law is set right now, we can get to the point where we can replicate something like the SARE program where you have a farmers' component to it, where they can actually apply directly. That -- our programs and the legislation that comes with it don't allow that. That will be a good additional component to the program that we do, where we can have a grower component or competitive small program that they can come in. But right now, all we do is work with farmers -- and not only work with them, make sure
they have a budget in the project. You know, if you don't have -- they don't have a budget, it means that they are just supporting the project, they are not part of the project. So that's a big requirement. But it's a great question and is one that we need to work together as industry to find the best way forward. So I'm not trying to avoid the questions, but I'm just saying that me sitting here, it's -- the solution to that would come from all of us. Thanks.

MR. POWELL-PALM: Thank you.

MS. JOHNSON: Thank you so much.

MR. POWELL-PALM: Thank you so much, Dr. Ngouajio. This is an exceptional opportunity for us to better inform our work, writing and thinking about research priorities. I think we've been in a bit of a state trying to figure out how can we be more effective at sending new priorities that actually make it into grant making and are useful to you. So we really appreciate your time. I've gotten a lot of clarity from this presentation. So very much appreciate you taking
the time again to sit with us today and share.  
Very much appreciate it.  

MR. NGOUAJIO: Thank you.  

MR. POWELL-PALM: And with every good

discussion, comes a little bit of a time check.  
So we're going to probably run a little bit late,
but I think those two presentations we had today
were just outstanding. And so I really appreciate
Kiki, as well as Dr. --

And I'm going to try this real quick,

Ngouajio -- Ngouajio. All right, Ngouajio.

Dr. Ngouajio, thank you again, and

Kiki. Thank you.

So I -- we are going to turn it over
to Wood. And we were just strategizing for how
to move through our -- the rest of our agenda today.

And I think, Wood, does it still work if we run
-- try to go through research priorities and
excluded methods and then defer our DTO discussion
to tomorrow during our deferred votes period?

MR. TURNER: It actually works for me.

I don't know if there's any -- I mean, we -- a
straw poll of the group to make sure that's okay with everybody.

MR. POWELL-PALM: Is that okay with folks? We all sit tight a little bit. All right. Appreciate you all.

So, Wood, I will turn it over to you for the material subcommittee.

MR. TURNER: Great. So like Nate said, we're going to discuss two things today, the discussion document on research priorities for 2022 and the proposal on excluded methods that Mindee will present after that. And then we'll move the discussion of distilled tall oil to tomorrow.

So I -- this may not be something that we need to -- I think it's important, and I think we tried to set this up so that we could have this discussion on the discussion doctrine and research priorities right behind Mat's presentation. We've had some of the discussion I think here today already. And I don't want to go through, you know, the entire discussion document ad nauseam. I
think we've gotten, you know, good feedback from the community as a whole on some of these -- on these priorities. And I think in general, what we're hearing is good support for the priorities again, which may not -- probably doesn't come as a surprise to anyone.

I think we've noticed some folks from the community who are leaning particularly hard on certain topics that we know are important -- that are of particular interest, including things like biodegradable mulch films, and the like. So I don't want to go through these in detail, but I did want to spend a couple of minutes just sort of raising a couple of points that I think are particularly useful.

One is that, I want to make sure the community is clear on the fact that -- and again, you may have heard me in my questions to Mat indicate that we produce an executive summary which is a list, an actual list of the very distilled down priorities that we've landed on. And then there's a supporting document, a longer document
that sort of goes into more detail about what these are intended to do. And I just want to point out that there was some feedback from the community that we had somehow disregarded or dropped, a discussion of more research into copper under the crops subcommittee, and that's not the case.

We -- the summary of the -- under disease management didn't necessarily mention copper by name. But if you look at our actual discussion document, we go into some detail about what we're really looking for in trying to learn more about the copper-based materials and to how to think about decreasing those needs over time.

So just want to make sure that was clear to folks.

I also wanted to point out, you know, I think some of the feedback that we've heard from community is, you know, I think we've had kind of a legacy concern, I would say, in the research priorities around learning more about suitable alternatives to BPA. I would say as well, I'm going to just use another acronym here, but hopefully folks know that when we refer to the other
materials of concern, like PFAs, for example I've heard the community's comments on that as well.

I've seen it several times in reviewing the materials and do think it's worth some discussion in our subcommittee, or in this conversation today about how to include by name and by reference some of the -- some other materials beyond just BPA that I don't have concern for folks in the community.

So I'm going to pause for a second and I guess, you know, again, in lieu of going through every single research priority, I want to turn it over for some discussion here because I think that's the intention. I think we've all really leaned into -- we've all really leaned into sort of what this presentation from Mat would tell us, and sort of how we really learn more about and create feedback with NIFA about what's getting funded, how we're learning about it in the process.

And I know a lot of you have some opinions about that as well.

I also, you know, want to indicate as well that I -- that was part of my question about
ORG. You know, how do we actually directly have involved farmers in some of this research and sort of keep it less about the ivory tower and more about sort of helping people on the ground, at least solve problems. I think that's what they're trying to accomplish here. So I hear that as sort of a meta-issue as well that I wanted to just flag too.

So with that, I'll pause.

And since the chair is the first question, I will take the chair's role and say, Nate.

MR. POWELL-PALM: Thank you. And then I'll --

MR. TURNER: What's your question?

What's your question?

MR. POWELL-PALM: I'll relieve you of it.

I was really heartened to hear the presentation today that our research priorities are so deeply used to inform grant making. I think one thing I would like us to do as a board is review the respective priorities in our subcommittees and
try to find stakeholders for each of those
priorities. And so I know that we bring our own
expertise, so we have experience when we bring
research priorities forth, but I think it would
be better to really figure out where the rubber
meets the road as far as what does our respective
community need, and how do we internally start to
elevate priorities. I think we throw a lot on our
list, but it'd be -- knowing what Dr. Ngouajio said,
it seems like it's really worthy of our time to
figure out how to bring very specific anecdotes
from stakeholders, lists of stakeholders who need
this work done, what the outcome is, to help us
work on this ourselves internally and prioritize.

I will then jump over to Amy.

MS. BRUCH: Yes. Thank you, Nate.

Thanks, Board, for this discussion.

I think that's huge, Nate, actually
because I just sit and look at all of these
priorities. I think that they're meaningful.
They would help sometimes advance some of our work
agenda items that have, you know, the rest of the
story, I guess. I mean, it's great that they're
getting funded, but that information is so critical
for just advancing forward our industry, and I
think there needs to be some worthwhile discussions
on how do we get feedback loops. Stakeholder
comment was really great. I know on my farm in
a network of Midwest farmers, organic farmers were
taking on the battle of the no-till organic. It
self-funded a lot of it. We call it real-farm
research. And usually you learn a lot from your
mistakes. That's the best way to put it.

So I mean, if there is a a way to kind
of capture this information so it can be useful
there's a bunch of us farmers that would love to
be helpful in this regard. But we just -- I think
we owe it to ourselves in the community to get
information and communicate it and start crossing
some of these off the list because there's going
to be lots more to place on the list and it would
be nice to work our way through them. Thank you.

MR. POWELL-PALM: Gosh. I can't
second that enough. As an inspector, I've seen
so many of these research priorities solved in the field by farmer, but that didn't -- that never gets out to a broader audience.

Jerry, please go ahead.

MR. D'AMORE: Thank you very much.

MR. POWELL-PALM: If you would lean into your mic just a little, Jerry, or speak up just a little bit. It's a little faint.

MR. D'AMORE: Wait a minute -- maybe if I -- is this any better?

MR. POWELL-PALM: A little bit.

MR. D'AMORE: Okay. I would just like to address the issue of the research priority for copper sulfate. What you said, Wood, was absolutely spot on for a year ago today. We were called to task, I think, on the wording that predated what's -- what we have now. The -- this research priority on disease control is a pillar, I think, of support for copper sulfate. And as a response to our stakeholder community -- and I think what's there now has been good for a year and is first rate. So I thank you for that. And
I really do think that the issue of, you know, from our stakeholder community has been quiet for a year that I see. So, thank you.

MR. POWELL-PALM: Brian, please go ahead.

MR. CALDWELL: Thank you, Nate.

Boy. I feel like, unfortunately my brain is kind of, like, headed into the slippage zone here. But one of the things that really strikes me with our research priorities is we have sort of two different types. And one type is sort of a broad, you know, topic to discuss. And another -- the other type is a series of really specific questions that we want answered usually, as part of our specific, you know, work with materials and whatnot. And I can -- it was really interesting to me when Mat mentioned the successful proposal that listed three NOSB priorities and they were all pretty broad. There was, like, no-till and side-by-side comparison trials, and then something else. But something like, you know, sort of the fate of copper, or something like that,
is never going to be, I mean, it's -- the chance of that being part of these kind of mega-projects that OREI is funding is really small, you know, and it's not going to be answered that way.

And I'm just feeling like maybe we need a two-pronged approach of getting these things answered. The more I think about it, it would just be really fantastic if there was some kind of a small project -- a small program within USDA, within NIFA, or whatever was the appropriate group that could address with small pots of money, but specific questions that we had and, you know, kind of really try to nail it. But, you know, the kind of -- the overarching OREI and ORG projects that I've certainly been involved with, at least three of them, they're not going to look at these kind of specific questions. So just wanted to put that out there.

MR. POWELL-PALM: I think that's a great question. It would be a nice follow-up question to Dr. Ngouajio as well, seeing how we strike that balance. That's a great point. I
think we should definitely follow up with that.

Carolyn, please go ahead.

MS. DIMITRI: I have a couple of comments related to what Amy said and then what Brian just said. And so I think, like, as a -- the OREI grants are all integrated. So that means that all researchers need to partner with either extension or education. So I think farmers are where the extension piece comes in. And so the information that gets disseminated -- like, I usually partner with someone from NCAT. So Amy, I think -- this is what I was thinking when you were talking. It's, like, I think it would be really -- it's really helpful when farmers have really close relationships with NCAT and other people that do outreach because it sort of makes that circle a little bit easier to close. Because they're -- they tend to do a lot of outreach, but they also kind of share information with researchers like, this is what, you know, these farmers that I know, I think is really important.

So, I mean, I guess maybe thinking --
I know what -- well, Amy, you already do a million things, but if there is just more involvement on the part of organic farmers, I think, in this general, talking a lot to extension people would be really helpful in just pushing forward thing -- pushing forward important questions, but also getting the information translated back to the farm.

And then, Brian, when you were talking I was thinking, yes, this has always been my thing. It's, like, I'm a researcher and I just really kind of do what I want. And if it -- if my interest happened to align with the NOSB, then I would find that helpful, but I would probably not change what I was doing based upon the NOSB list. So these very specific things I think could be part of cooperative agreements and I'm, like, really going out on a limb here. So, like, NIFA can't give cooperative agreements through the OREI or ORG because the way the Farm Bill gives them money, but I just wonder if there's some way for stakeholders to get involved.
We have a Farm Bill cycle coming up. Like, is there a way to either have, like, some other kind of grant program? And I know this is a very heavy lift, but that would be something that would be more along the lines of a cooperative agreement. And then there could be a lot more control. And these more refined but very specific questions that are important, maybe, to an organic farmer or an organic handler more than it would be to a researcher. So I'm just thinking, trying to think of ways out of the box. Because I think the way the funding system is set up right now, Brian's right, we're not going to, you know, very specific materials questions are not really going to be addressed.

MR. POWELL-PALM: Thank you for that. Kyla, please go ahead.

MS. SMITH: I think along all these lines I was just trying to think about how do we get it -- the information back out, or whatever. And so, you know, Dr. Ngouajio was talking about, you know, his challenges within his team. And so
-- and Amy is talking about, you know, just on-farm research that happens, that isn't part of necessarily a big funding stream or any type of grant or co-operative agreement, or whatever. So I was just thinking, like, is it -- would it even be possible to periodically pull together, you know, various folks to do, like, a research update. And there could be, I don't know, someone who's done some on-farm something; someone who's wrapped up there OREI grant; someone who's had, you know. We've also been texting a little bit amongst -- and, Amy, you were mentioning about how just there's, like, all these other, like, ag grants that are out there too that are, like, not within OREI stream. So, like, I don't know, just try to pull together pieces, parts, to get every so often just an update of what's going on out there.

MR. POWELL-PALM: I think that would be huge. I think, if I might, I think the foundation of that question is trying to get more stakeholder outreach from the Board to our respective communities to try develop these
channels of communication. Who's doing the research? If each of us knows a research in our community -- a researcher in our communities that we could tap to try to get a summary from, I think that would be super helpful, just to kind of create small pipelines of information to feed into the Board and share with each other.

Allison, please go ahead.

MS. JOHNSON: Thank you. This list is so long, and it feels like there's so much work to do. So I'm looking at it kind of with two big sets of stakeholders in mind as I think through what the highest priorities from my perspective would be. And so one group of stakeholders is people who need help with production practices. And from that point of view, I'm wondering about who is served and who isn't served well enough. And then I'm also thinking about what other audiences might be interested in the outcomes of this research. And so there, what comes up to me is, who needs more research to be convinced that organic is valuable.
So two things that come to mind that I didn't see on the list yet, I just wanted to offer in addition to, these all being really important priorities. One is regionally relevant techniques that are important in underrepresented regions. So the main one that comes to mind there from interviews I've done with organic producers is high tunnels in the south. It's an area that has a pretty small organic sector and the -- everyone that I've spoken with really in the south has said that they haven't found much help in managing their systems in a high tunnel context.

And then the other is on the climate change priority. I think we heard a lot yesterday about an audience that needs convincing with quantification and maybe just documentation of the qualitative benefits of organic. So it seems like we're in a moment where even if, you know, we as a practical matter recognize that there are a lot of benefits out there, there's an audience that needs to see it written down in a journal to believe it or to be able to advance a policy or whatever...
else may follow from that. So I'd love to see that
included too.

MR. POWELL-PALM: I think that is huge
looking at the climate-smart solutions information
that I heard yesterday, that's -- we could have
entire extra subcommittee on climate-smart
solutions for figuring out what math needs to back
up what practice. So, yes. That's a great point
and we should definitely be considering that.

Liz, please go ahead.

MS. GRAZNAK: I guess I'm not 100
percent positive that this group is the one that
needs to hear this. But the thing that immediately
popped into my head was, in the last 12 years, I
have participated in a number of our research
projects with local universities that are doing,
you know, research here. And I personally, you
know, think that the work they're doing is super
important and so I'm willing to participate.
Also, I'm, like, one of the only organic farms that
they can ask to participate. But the amount of
money that they offer farmers to be the
participating farm is laughable. You know, like
200, $300. I mean, it's such small amounts of
money that for the amount of time and, you know,
growing space and, et cetera, that it requires of
the farmer to participate in the research project,
it's huge and the -- what they are thinking that
the equivalent amount, you know, of money that they
offer us, it's really, sort of crazy.

You guys aren't the ones that really
need to hear that. But for 12 years, that's what
I've been dealing with with the people that are
asking me to participate. And honestly, the last
two times that I've been asked, I've said no. I've
said no, not doing it. And that's unfortunate for
them because literally they don't have other
organic farms that they can ask in Missouri. So
anyways, again, not that you guys are the ones that
need to be hearing that. But, yes.

MR. POWELL-PALM: I would say that we
are the ones who need to be hearing that just
because articulating what those barriers are for
all of us. And to kind of say, I'm in the same
boat, Liz. I have definitely participated in these projects. And when you have a field test plot right in the middle of your field and you have to make all these turns in your tractor --

  MS. GRAZNAK: Right.

  MR. POWELL-PALM: -- around it, it's worth a lot more than 200 bucks.

  MS. GRAZNAK: Yes.

  MR. POWELL-PALM: It doesn't seem like a lot of labor but it really adds up. So thank you for that.

  Brian, please go ahead.

  MR. CALDWELL: Really quickly. I'm going to write a long e-mail to OR -- ORF -- what is it -- OFRF?

  MR. POWELL-PALM: OFRF.

  MR. CALDWELL: Excuse me -- OFRF, who is going to be evidently doing some kind of evaluation of NIFA, putting out a bunch of this stuff. And to our partners who are watching this whole exchange here, I want to put out there that applying for one of those conference -- or several
of those conference grants that Mat mentioned, that is a way to get all that information spread out to your regional producers. So that can -- those are pretty easy to get. There's not a lot of funding there, and that's a really good avenue for information sharing.

MR. POWELL-PALM: Absolutely.


MR. ZAMORA: Yes. I couldn't unmute myself. I will just echo what Liz said. And you kind of get overwhelmed sometimes with so many researchers. They hear of your name, you're a good collaborator. The amount -- the rewards for the farmer are very limited. But, Liz, I can say that, I mean, I can tell you--

MS. GRAZNAK: They should pay you more.

MR. ZAMORA: -- in the next three weeks I'll have a farm journal here with collaboration with the NRCS. I'll have a couple of other organizations, like ALBA doing a, you know, strawberry field day and that sort of thing. We
had, I mean, you've -- I can name ten things that I'm doing this year, just collaborating with other people. But, yes, there is -- there seems to be very little that goes directly to the farmers that are being -- that collaborate in this situation for research. And, you know, sometimes it just -- the way that the grants -- and how the money funnels down and trickles down it's -- it needs to be -- it needs some arrangement there, I think.

So I just wanted to echo that, Liz. But don't give up because your name gets out there and then maybe you'll -- you apply for a grant and then maybe -- hopefully you'll get it, you know. At least that's what happened to me. I got a CDFA grant to build some hedgerows. And it was, like, 40 grand, which is really good. So anyway, that's all I wanted to say and -- yes, when it comes to that.

MR. POWELL-PALM: I'll kick it back to you, Wood.

MR. TURNER: Thanks for the discussion, everyone. I'd like just to reiterate
Nate's point, I would just suggest that coming out of this meeting that you all, you know, bring your set of priorities back in front of your committees and make sure we've discussed and incorporated any new thinking any of you has on the -- and we'll get this document updated and kind of reflecting some of our real-time thinking on this. So thanks very much for that.

With that, let's move on over to Mindee, the lead on our work -- the committee's work -- subcommittee's work on excluded methods. We have a proposal in front of the board.

Mindee.

MS. JEFFERY: Thank you. First off, I'd like to thank the materials subcommittee. This subject can really give a person stagefright and the Board has really answered the call to review drafts. So thank you very much, everyone.

The organic community consistently acknowledges that regulatory frameworks using a process-based approach in definitions as a trigger for regulatory oversight needs to be updated to
remain relevant. We watch as new techniques in biotechnology rapidly outgrow our regulatory definitions requiring a high level of specialized knowledge to make clear distinctions when we are classifying excluded methods for this USDA version of organic systems. It is an untenable position as the biotech industry is rapidly outpacing any regulatory structure and his very difficult to track.

Before us in this meeting is a proposal to clarify which methods are considered excluded in organic production, specifically cell and protoclast fusion. In this case, we are making a minor clarification to the TBD list. This proposal seeks to remedy the information provided on these text tweaks as there is information in terms defined at 205.2, Policy Memo 13-1. And there were follow-up notes on both techniques left in the excluded message charts by previous NOSB work. It is clear from terms defined, the policy memo, the NOSB's work, and stakeholder feedback that our community is aligned with the proposal
to list cell and protoplast fusion as excluded methods, except when the techniques are employed within taxonomic families, with a consistent suggestion from stakeholders for a language tweak.

In public comments one group expressed full support for the NOSB recommendation as stated in the published proposal with one small suggestion regarding the definition.

And do we have a slide there? Thank you.

We suggest that recombinant DNA be changed to in vitro nucleic acid technologies to provide a more comprehensive definition. In vitro nucleic acids technologies includes techniques including recombinant DNA and ribonucleic acid RNA techniques that use vector systems and techniques involving the direct introduction into the organisms of hereditary materials prepared outside the organism. Because it is not only DNA that can be manipulated, but also RNA and other materials, we find this definition to be more comprehensive.

In addition, this is the definition used by Codex,
which brings our standards into alignment with this global standard.

This was a consistent suggestion across stakeholder groups. Seed companies expressed full support for this proposal. Their comments represented along with a strong emphasis on the need to strengthen organic seed requirements. One seed producer reflected that we are facing the potential stagnation of organic seed usage and a weakening in the resiliency and public perception of the organic produce market. Another group noted that the transgression of excluded methods into organic systems continues to create an unjust playing field with the burden falling squarely on the shoulders of growers and markets that do not benefit from, and in fact, are harmed by the presence of these excluded methods.

Here, I would echo the notion that the best way to prevent excluded methods transgressions in seed supply is to grow our investment in certified organic seed. I was happy to hear that stakeholders have elevated this issue
as a priority and thank Dr. Tucker for reflecting the concern in the program update yesterday. And thank you, Kiki, for your presentation.

Farmers and producer groups were also in full support of the passing of the proposal, also suggesting the amendment to the language. In conclusion stakeholders agreed that the determinations for when and where both techniques are to be allowed or excluded as outlined in the proposal language are correct with this minor adjustment, as you can see on the slide. The materials subcommittee was concerned that the suggested language amendment would constitute a substantive change, sending us back to work in subcommittee. We raised this concern and would like to thank that program for providing the clarification that this is a technical correction that can be addressed in our cover letter should we pass the proposal.

And there I will take your questions.

MR. POWELL-PALM: Yes. Thank you for this work, Mindee. This has been a huge lift.
So I really appreciate your expertise and time here. Brian has a question for you.

MR. CALDWELL: No. I just want to thank Mindee for her tremendous work on this over a long period of time. And she's intending on going a long way into the future with it too, and get more of these TBD lists, you know, resolved, which they've been hanging around for over a dozen years, some of them. So I really appreciate that.

And one last comment as we move forward is that -- just want to point out that the definition of excluded methods talks about the -- I'm going to read it here: A variety of methods used to genetically modify organisms or influence their growth and development by means that are not possible under natural conditions, et cetera.

And I just want to point out that whole thing of -- that whole point of it's the means, not the ends, that they're talking about. So sometimes a genetic change could have happened naturally, but you just use other means to accomplish it. But it's the means that we're
looking at, not the ends. So that's -- it's kind of a subtle distinction, but it's really important as we move forward with some of these gene editing techniques and other aspects where the changes might have been possible naturally if, like, everything had been given 50 years of, like, you know, millions of crosses and you could finally get that thing. But what we're talking about here is whether the means used to accomplish that same goal are allowed or not. So that's just my little caveat there with everything. But thanks so much, Mindee.

MR. POWELL-PALM: Amy, please go ahead.

MS. BRUCH: Yes. Thank you, Mindee. This is incredible work, very important to our community, just clarity on these issues. And one comment that really echoed with me just even throughout this whole -- throughout our whole work agenda is just the importance of elevating these issues outside of the handbook for our standard operating procedures and getting them really coded
in the regulations. So instead of them being voluntary, we can really have some meat for regulation. So just wanted to bring that comment forward and highlight that. Thank you.

MR. POWELL-PALM: Thank you, Amy.

Any other questions, or comments, or discussion?

MR. TURNER: Wood.

MR. TURNER: I just want to say really quickly --

Sorry, Javier.

I just want to say really quickly, again -- just giving props to Mindee for the passion and the sense of purpose she has for this work. It's just -- it's infectious for all of us. And I think, you know, if we can all bring as much of that energy to everything we do, it's -- we're going to be an effective board. So I just wanted to say that.

MR. POWELL-PALM: Amen. Thank you for that, Wood. I couldn't agree more.

Javier, please go ahead.

MR. ZAMORA: Hey, Mindee I -- this is
kind of -- this is where I find myself a little crossroads. I'm trying to understand what exactly this wording change will mean. And to me, it feels like there is some sort of a need for me to have some examples of what is it that they're talking about. Because I -- when you start thinking of -- listening to some of the comments like, you know, advancing plant propagation or something that could potentially happen in 50 years and you're going to speed the process, it just sounds like GMO to me. And it's just, I mean, I'm not, you know, I don't have the knowledge to really understand how this process work. So I am going to need some help and really to make -- to understand what exactly this excluded method it's trying to accomplish. And who, you know, who's really asking for this change if in fact it's a change, or it just the wording on how it's written.

MS. JEFFERY: Is your question specifically in addressing the word change in the proposal, or do you want me to give you a larger overview of the excluded methods issue?
MR. NANDWANI: I think I mean, if -- we probably are out on time, but I will probably like to hear you just so I can understand that. I'm sure there is a lot of people that don't really have the knowledge exactly of -- especially in the farming community, that what is it that the Board has been asked to look at or perhaps change?

MS. JEFFERY: Yes. In this specific instance, how we go about -- how biotechnology has progressed, and how it applies the technology is happening so fast that, honestly, I just didn't get the words right with the recombinant DNA technology, that's a few years old way of addressing the issue. And so the in vitro nucleic acid technologies is a better update because now we need to use the -- they're using the technologies in more subtle and subtle ways inside the cell. How'd I do, Dilip, did I get it right? Do you want to take -- do you want to speak further to that?

MR. NANDWANI: May I add a quick comment, chair?
MS. JEFFERY: Yes. Do.

MR. NANDWANI: I would say first thing Javier's question, and this is very simple and no one can deny it. Everybody will be agree that nucleic acids are RNA and DNA in the scientific world. So there is no doubt about that. Nucleic acid, if we change the term from recombinant DNA technology and we change to in viro nucleic acid, it rather -- it's helpful for us and organic community because, you know, let's say 20 years ago, 30 years ago, we had only DNA recombinant technology, but now we have RNA technologies also. This COVID vaccine, by the way, just giving an example is -- it's from MRNA -- MRNA technology. So nucleic acids are DNA as well as RNA. So in almost so many years now, we know about this and scientific world is using. So this is a correct term using the nucleic acid technology and we are including RNA. So that's good actually.

Now, the second question is whether we go about this and how, that's -- is still open and I'll leave it to the board.
Do you want me to add something else, Mindee?

MS. JEFFERY: Well, Yes. I mean, it's a very complicated subject the way that we deal with excluded methods and I'd be really happy to go over that in depth. We have the definition and because the technology has moved so much over the years, the work were doing in this context is to keep up with biotechnology progress so that we are defining things that we will exclude because they are genetic manipulations, is the sort of the simple, fast way to say it.

MR. NANDWANI: Correct.

MS. JEFFERY: Yes. Now, we can keep talking about this, but in this particular instance, thank you for your explanation and your assistance, Dilip. I appreciate your expertise.

MR. NANDWANI: No. You nailed it down correctly, exactly. I mean, you did very well. Thank you.

MR. POWELL-PALM: Any other questions or discussion for Mindee?
MS. JEFFERY: I really appreciate the written comments wherein someone referred to this as mind-bending subject. So we're all in it together.

MR. POWELL-PALM: All right. Well, not hearing -- oh, yes. Any others?

MR. TURNER: No. I just wanted to -- I'm happy to turn it over to you, Nate, in terms of how we're going to field it.

MR. POWELL-PALM: Sure. Yes. If -- we have a proposal. So we are going to be voting. And so the motion is -- I'll let Mindee, I think, let's see --

You made the motion. Please repeat your motion.

MS. JEFFERY: It's pretty long. There -- it's on -- there's -- it's on the slide. There's two. Do you really want me to read the whole thing?

MR. POWELL-PALM: Not really.

So we can see the motions as displayed on the slide. The motion was made by Mindee and seconded by Logan. And if I have this right, Kyla,
we're going to be starting with Carolyn, or are we starting with Rick?

MS. SMITH: I think I -- I think I have it starting with Rick.

MR. POWELL-PALM: Rick. Okay.

Perfect. All right.

So Rick, what is your vote? Do we still have Rick? Let's see. Oh, he's almost back.

MR. TURNER: There he is.

MS. SMITH: You might have to tell him again. He may not have heard you.

MR. POWELL-PALM: Rick, you're going to be the first one to vote on this one.

MR. GREENWOOD: Yes.

MR. POWELL-PALM: All right. We have a yes from Rick.

Moving on down, Liz.

MS. GRAZNAK: Yes.

MR. POWELL-PALM: All right. And then Kim.

MS. HUSEMAN: Yes.

MR. POWELL-PALM: Mindee.
MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison.

MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip.

MR. NANDWANI: Yes.

MR. POWELL-PALM: Logan.

MS. PETREY: Yes.

MR. POWELL-PALM: Kyla.

MS. SMITH: Yes.

MR. POWELL-PALM: Wood.

MR. TURNER: Yes.

MR. POWELL-PALM: Javier

MR. ZAMORA: Yes.

MR. POWELL-PALM: Amy

MS. BRUCH: Yes.

MR. POWELL-PALM: Brian.

MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry

MR. D'AMORE: Yes.

MR. POWELL-PALM: And Carolyn.

MS. DIMITRI: Yes.

MR. POWELL-PALM: And the chair votes
MS. SMITH: I have 15 yes, 0 no, 0 abstain, recused, absent. The motion passes.

MR. POWELL-PALM: If I were in person again, a big applause for the work Mindee did to get us all through this. It was incredible work.

MS. JEFFERY: Everybody, like I said, I was begging people to read things again and they did.

MR. POWELL-PALM: So thank you, everybody, so much. That concludes today. We're going to pick up DTO and finish off the material subcommittee agenda tomorrow during the deferred votes period. And tomorrow we're going to start off with another heavy hitting group, and that is the crops subcommittee. And we're going to have a lot of good work to do there. And then after crops we'll go to lunch. Policy development will be next. Go into our deferred votes review, NOSB work agenda and material updates. Give a formal welcome to our new members, and then have other business.
So any closing questions from the board or Jenny?

MS. SMITH: Just clarifying. So we're just going to start with crops not finish out material which is DTO. Okay.

MR. POWELL-PALM: Correct. Yes. So we're going to -- in our agenda where we see Deferred Votes, we're going to put the rest of materials in that time slot.

MR. TURNER: I missed that. I didn't hear that. Okay. So got it. Thanks for asking the question, Kyla.

MR. POWELL-PALM: Thanks for asking, Kyla. Appreciate that. Yes.

MR. GREENWOOD: And I appreciate it because with a couple of things we may take a fair amount of time. So that'll be -- by the way, I left the camera to separate one of my dogs from a very large snake. So that's --

MR. POWELL-PALM: Oh. Very good.

MR. GREENWOOD: We're all living, though.
MS. TUCKER: That's going to be in the transcripts for this meeting.

MR. GREENWOOD: And it probably deserves to be there. They know it's real.

MS. TUCKER: Definitely. Definitely. Your dogs deserve to be captured in perpetuity there.

Nate, beautiful job today.

MR. POWELL-PALM: Thank you, everyone. Today was a great day. I have nothing but deep gratitude again, for all of your work and bearing with us, and to our speakers today, and always to Michelle for keeping us afloat. So thank you, everybody, again, and we'll see you tomorrow.

All right. Take care everyone.

MS. SMITH: Thanks, everybody. Right. So I'm going to stop the recording.

(Whereupon, the hearing in the above-entitled matter was concluded at 5:32 p.m.)
UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC STANDARDS BOARD

SPRING 2022 MEETING

THURSDAY
APRIL 28, 2022

The Board met via Videoconference at 12:00 p.m., Nate Powell-Palm, Chair, presiding.

PRESENT
NATE POWELL-PALM, Chair
MINDEE JEFFERY, Vice Chair
KYLA SMITH, Secretary
AMY BRUCH
BRIAN CALDWELL
JERRY D'AMORE
CAROLYN DIMITRI
ELIZABETH GRAZNAK
RICK GREENWOOD
KIM HUSEMAN
ALLISON JOHNSON
DILIP NANDWANI
LOGAN PETREY
WOOD TURNER
JAVIER ZAMORA
NOP STAFF PRESENT
MICHELLE ARSENAULT, Advisory Committee Specialist
JARED CLARK, National List Manager
DAVID GLASGOW, National Organic Program Associate
Deputy Administrator
ERIN HEALY, Standards Division Director
ANDREA HOLM, Materials Specialist
DEVON PATTILLO, Standards Acting Assistant
Director
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MS. PETREY: -- I need to -- the webinar is being recorded and we'll have a full transcript of the entire meeting, including the two comment webinars from last week that will be available a couple of weeks after the conclusion of the meeting today. All right. Nate, I am going to turn it over to you.

MR. POWELL-PALM: All right. Thank you and good morning, everybody. We had a good rain here last night, so I'm just reveling in my sprouting seeds. I hope everyone's doing well out there today. If I might, and I know this is a burden on all of my fellow members. If we could go through role call again. And again, if you would report to the group what you found most exciting and innovative, delightful about yesterday. I was really, I think it's a really good reflection. We had some wins yesterday as a group. Our work really sailed through. So I'd love to hear some reflections on that. And we'll
go quickly and then dive into crops, which will be ever more exciting. But if we wanted to get kicked off, it'll be a way that we all wake up together and get that -- get things rolling. So to start I won't make you go first every time Amy, so I'm going to start with Brian.

    MS. BRUNCH: Oh, no, you have to go with a Z. Wood and Javier having to go at the end.


    So he's not always at the end here.

    MR. TURNER: Now the pressure's on -- I shouldn't -- I should've never said that. Why, why in the world? Well, let's see, Wood Turner happy to be here today from California. You know, I think since the research priorities process has been so -- we've also leaned into it and events eventually did entered of what it really means and that really works. I feel like we got some clarity onto the what that -- what the impact of that process can be and through our role and I thought that was great yesterday, so thanks.

MR. ZAMORA: Good morning, everyone. Buenos dias. I just felt a lot more comfortable yesterday and I'm just amazed on the wealth of knowledge on some of that new Board members and some of the, you know, older Board members and just how cohesive this Board is on how such a good work that's getting done. Yes. Excited.

MR. POWELL-PALM: Hear, hear. Amy, please go ahead.

MS. BRUNCH: Thank you, Nate. Welcome from Nebraska. Hopefully, we'll get that rain that you had, Nate.

MR. POWELL-PALM: We're sending it your way.

MS. BRUNCH: Maybe today because we're east of you, yes, hopefully. Anyway, gosh, I was at -- I was thinking I was going to go at the end. But yesterday, just in reflection, I was really impressed with the different perspectives that the Board was able to discuss. I was really overjoyed
by just the new member participation. I loved Dilip's relevant anecdotes to the excluded methods, and just providing some additional technical information. I know each and every one of you have a great perspective and I'm looking forward to having and hearing more of that in our conversations. Thank you.

MR. POWELL-PALM: Thank you, Amy. Brian, please go ahead.

MR. CALDWELL: Hi, Brian Caldwell, here from Central New York, where we had snow flurries yesterday, which was kind of amazing for me, but I was really sort of intrigue by the seed discussion. And I felt like it could have gone on for hours because there were a whole bunch of issues that I had thought of, but we didn't have enough time to really cover it. And it's such an important issue, and it has just like everything else that we seem to get into here. The more you get into it, the more sort of nuances and convolutions there are. So I was fascinated by the seed discussion.
MR. POWELL-PALM: I think it speaks volumes to a lot of the issues as a community that we're experiencing. It kind of housed a lot of our concerns. So I think it spoke to a lot of folks. Thank you for that. Jerry, please go ahead.

MR. D'AMORE: Hello. And I am probably still a little handicapped on volume. I thought I had it fixed, but it's not, so I'll talk loudly. I'm just going to have to echo the thoughts about our brand new class that came in. It just like -- looks like they've been around for a year already. I'm just in awe of you in the way you just have fit in and participated. So thank you.

MR. POWELL-PALM: Hear, hear. Next up we have Carolyn.

DR. DIMITRI: Good afternoon, everyone. I'm not a farmer, but I do -- can tell you it is cold outside in New York City. I had to wear down coat today. I quite enjoyed the conversation and the presentation on seeds. And
I think there are a lot of really interesting economic issues worth studying in terms of adoption of organic seed and how that will play out over the future. Thank you.

MR. POWELL-PALM: Thank you. Rick?

MR. GREENWOOD: Yes. Rick Greenwood, calling in from the San Diego area of California. And I think I want to echo what Wood said. I've been on the Board for a long time and we've worked on research priorities. And I never really felt that they went anywhere. We spent a lot of discussion, had a lot of priorities and then they just disappeared and I think having the discussion and knowing that they get acted on and that if we can close the loop. So we really know what happens to them. I think it's going to make the whole issue of finding the priorities more important. It's one thing to work on and stuff. But if you don't think it goes anywhere, it seems like a meaningless activity. So I thought that was great. And the other thing is how well we're working as a Board. I mean, it really seems like we're a well-oiled
machine, so I'm impressed.

MR. POWELL-PALM: As our senior member, that is very meaningful coming from you because we have no point of reference. Other than this is what --

MR. GREENWOOD: I hope you mean, the longest serving member, not the --

MR. POWELL-PALM: Longest-serving member, of course.

MR. GREENWOOD: Not the most senior member, although that's probably true also.

MR. POWELL-PALM: Well, thank you for that. Liz, please go ahead.

MS. GRAZNAK: Good morning from Mid-Missouri. Liz Graznak, Happy Hollow Farm. I still definitely feel new and that there is a whole lot that I need to learn. But I really am enjoying myself and I did also really appreciated the two presentations about seeds and research in the role of NIFA yesterday, those were great.

MR. POWELL-PALM: Thank you for that, Liz. Kim?
MS. HUSEMAN: Hi, good morning. Kimberly Huseman, I'm in Windsor, Colorado. From yesterday's conversations beyond what's already been mentioned, I'm going to give a shout out to Kyla. Your description and how we talked about the classifications as we're looking at sunsets, and the early days of sunsets, and I've noticed over the past three years, or my time on the Board, is going to my third year, how we're all, you know, we're talking about are things properly classified and what are those classifications like at -- or look -- need to look like. So your expertise there is very well welcomed on the Board, so shout out to you.

MR. POWELL-PALM: Hear, hear. Mindee, please go ahead.

MS. JEFFERY: Similar echo, a lot of the thoughts from the deliberate -- on the new members and all the presentation information, and I really appreciate our ability to deliberate. And just want to thank everybody for bringing the heat on my sunset.
MR. POWELL-PALM: We saw an opportunity, talked about those pig intestines, and we were rescued. Allison, please go ahead.

MS. JOHNSON: Hi, everyone. Yes, aside from the beautiful picture of a barrel of intestines that I'm going to hold in my head for a long time. I was really pleased and surprised at how much cohesion and there was on just core organic principles yesterday, QUATs and excluded methods. It's just really clear that there's a lot of consensus about what should and shouldn't be in organic. And I appreciate all the stakeholder help in, you know, getting the words just right, but, especially, you know, coming in as a new person from, like, a moderately engaged organic consumer position, you hear a lot of controversy and focus on disagreement on the outside. So it's really affirming to remember how much agreement there is, and I'm excited for that.

MR. POWELL-PALM: Absolutely. Thank you for that. Dilip, please go ahead.

DR. NANDWANI: Good morning, can you
hearing well? I changed my microphone today.

MR. POWELL-PALM: Yes.

DR. NANDWANI: Good. Thank you.

Good morning again from Tennessee. It's nice weather today, it's a little bit warm. It was very cold yesterday, around 40 degrees, so that's exciting. Well, yesterday, the second day of meeting went very well and I am thankful to all the members and administrators, you know, for their support. I presented my sunset and I kind of stumbled when Brian asked me the question and I told myself that, Dilip, you have to be prepared next time. So I learned something, but it's very exciting of course, and learning. And I found that both speakers, Kiki (phonetic) and Dr. Gwajio (phonetic) both were excellent and I learned a lot of new information and thanks for the update they provided. Thank you.

MR. POWELL-PALM: Thank you. Logan, please go ahead.

MS. PETREY: I've got a touch-screen computer now, so it's super easy. Anyways, I want
to thank you all for accommodating my tardiness yesterday so I could vote and apparently I missed the intestinal bill with Mindee, so I'm super glad you all could accommodate me.

MR. POWELL-PALM: You'll get a chance in the fall.

MS. PETREY: That's all right. I'll get the stomach for it. So yes, congratulations to all the new members. You all participate very well and way more than I did my first year. So you're bold, if anything. So you're doing great, but it wasn't the two presentations, you know, mentioned that the research that we do have an impact on what the research becomes. But -- and then also with the seed, it looks like we're also looked at for implementation of things. So it is neat to see the whole cycle of -- you know, we're looked at for the ideas and innovation and also the implementation. I think as long as we continue with both of those people will keep coming to the Board for action and so that does make our stance more powerful. So thank you.
MR. POWELL-PALM: Thank you for that absolutely. Kyla, please go ahead.

MS. SMITH: Thanks, everybody. I'm here from -- with you today from Central Pennsylvania. Kim, you'll be happy to know that I already have a spreadsheet started tracking all of the re-classifications suggestions that have come in for public comment. Anyway I -- of course, I'm like super happy and proud of Allison and Dilip as fellow handling subcommittee members on their first sunset presentations. And then the second thing that I was excited about was Mindee's presentation on excluded methods, and like getting off of our work agenda and continuing to chip away at that. And hopefully we'll see some action from the program side. So excellent work carrying that through, Mindee.

MR. POWELL-PALM: And I'll close this out. Nate Powell-Palm, Bozeman, Montana, Cold Springs Organics. I wish I could just go through and list all of the things I appreciate about each
and every one of you from yesterday because it was just such a team effort to get through the agenda. But I want to give a special shout out to Wood because CPC is hard and I think that was really well managed. You drove that train right. And we were able to deliberate. It felt safe. It was very comprehensive. And thank you for your leadership on that. And I know you've given a shout out to Mindee, but one more because excluded methods very tricky and very core to our values. And so the fact that we got through that and we weren't all crying or frustrated is a testament to your leadership. And just the groundwork that you laid for us to engage this debate in this discussion with a lot of really good information two of the other things I wanted to throw in. It was just so awesome when we were discussing CPC and Rick came in with that real world example of medical application. This is the expertise that this Board brings is having where we are internally able to have really incredible conversations just with the 15 of us. It's a lot of expertise on this
Board, so thank you for bringing that. Additionally, a shout out to Dilip. When he came in with the discussion about what into -- I need to get it right, nucleic acid is, and how we're looking at being really practical but really effective with our wording and our definitions. So thank you, Dilip, for bringing that. Shout out to all of you as well. The participation was great we got a lot of great work done. One more day, guys. And we're going to get through it, so --

MS. JEFFERY: Okay. I'm going to stop you there for one second, Nate and just take a minute to like shout you out for great leadership in your first meeting and really being able to address all those higher level topics with a lot of class.

MR. POWELL-PALM: I appreciate that. Well, it's a pleasure and an honor to work with you all. One more shout out I wanted to give. And I think this really speaks to a lot about the community, but Jenny has been at this work for
10-plus years now. That's huge. I think when we think about how does organic really develop. You got to have leadership that sticks around, gets that institutional knowledge, and can keep leading us. So Jenny, we hope you have at least another 10 or 20 in you, because we need your leadership and really appreciate your guidance on all of this, so thank you. Any other shout outs?

DR. TUCKER: It's an honor to work with all of you.

MR. POWELL-PALM: Yes. Thank you.

And this is the --

MR. GREENWOOD: One --

MR. POWELL-PALM: Go ahead, I'm sorry.

MR. GREENWOOD: Nate, just one comment. Yes. No, just one comment for Jenny.

I was so impressed the other day with all the numbers that you remember of all the different categories and for a while I was going to write them down and see if you were making them up, but apparently they're real. So that was very impressive. I don't --
DR. TUCKER: I have an amazing team here and so -- I know I get to talk to you guys, but, you know, the notes that I have all come from an amazing team that makes me smarter every day. So it is a privilege to work with them and that's why I get up every day and coming here is why I continue to work with organic. So thank you all. Nate, your leadership during this meeting has been fabulous, I'm really grateful. And I totally agree about how smart and talented this Board is. It's very humbling.

MR. POWELL-PALM: Thank you, everybody, again. All right. So Rick, are we ready for some crops?

MR. GREENWOOD: We are and we have a lot, I think there's 15 sunsets today, but we start off with two proposals. And the first one is the highly soluble nitrogen fertilizers, which seems like we've been discussing for a long, long time, started with Steve Ela working with Amy and then Steve took off for some reason and left it with Amy. So Amy, why don't you get started and then
we'll open it up for discussion.

MS. BRUNCH: Yes, no problem, Rick.

Thank you. And I do want to recognize Steve's efforts in making this proposal take shape. He also participated, bless his heart, in the comment process. So post-Board service, he has been very vocal on just expressing how important organic -- the organic industry is. So thank you, Steve, I'm sure you're listening today. Anyway, I want to separate this. This is a little bit complicated as you could tell, the proposal wrote was pretty extensive so I just want give some history, so everybody can come to speed pretty quickly on this and then dive into some of the stakeholder comments.

So just as a recap, the vote at the fall NOSB meeting to prohibit ammonia extracts is an example of when a new material meeting organic definition of naturally derived enters the organic marketplace without a review process as to whether the material complies with OFPA or not. And this a little bit is in relation to what Kyla had
mentioned, the differences between how substances are handled in the crops livestock committees versus handling. Today, this proposal, which is actually a practice standard and not the prohibition of a material is in response to the Board and other stakeholders' concerns that this new emerging category of non-synthetic highly soluble nitrogen fertilizers that fall outside of the definition of ammonia extracts will be developed in the future, having no limits or restrictions prior to being circulated and used.

So as a commenter stated last fall, highly soluble nitrogen sources cannot be addressed in a vacuum, we can't look at these substances one at a time because actually there's going to be a proliferation of them. So we must take a broader approach to limit highly soluble nitrogen sources as a whole and not substance by substance. So the program history and precedence dating back to when the final rule was approved in 2000, the NOP agreed with the NOSB recommendation and put specific regulation of
substances of higher solubility. The NOSB has also set precedence with certain substances, including sodium nitrate and others just with prohibiting them or putting restrictions for use.

In 2009, the NOP advised vigilance in the approval of all liquid fertilizer products and then in '11 official guidance was used in relation to nitrogen liquid fertilizers that had an analysis of greater than three percent. And again, yesterday we spent some time discussing the handbook versus actual regulation. So today what we're discussing, actually couldn't be anticipated by OFPA. This is a very new emerging category.

So the rationale for the practice standard is basically to prevent the widespread use of non-synthetic, highly-soluble nitrogen sources, while allowing for restricted use of these materials in critical situations, which was an important component vocalized by our farmer stakeholders. One of those instances in particular is actually abnormal weather. In general, the comments from long-time organic
organizations, growers, and even a manufacturer
of natural sodium nitrate tended to be in favor
of limiting highly soluble nitrogen fertilizers
based on organic principles of enhancing soil
biological processes.

So a few things that this proposal
clarified, because this was sent back to
subcommittee last fall. So the clarifications
included the wording, we change nitrogen products
to nitrogen fertilizers. There was clarification
to how fertilizer blends were calculated and why
that component, why that piece was important,
clarification on the calculations. Many examples
were included. Several certifiers and farmers
mentioned that the calculations were clear. Some
certifiers mentioned that, with additional
guidance from the NOP, this could be executed.

Clarification on placement. So the
proposal is indicating this practice standard he
placed at 205.105. Ultimately, the placement will
be left up to the NOP, but the intent is that this
listing applies equally to all producers of food
crops, similar to the materials placed in 205.602 or 205.105. Through recent public comments, there are four additional areas that I want to discuss before we wrap this up.

Relationship to OFPA. As was determined with ammonia extracts, the use of highly stable nitrogen fertilizers may not be compatible with organic production. Many commenters noted that the unrestricted use of HSN fertilizers runs counter to organic principles outlined in regulations and pointed to environmental concerns, while others say there's a need for more consistent research specifically on organic land.

The second one being OFPA versus OSP, organic system plans. As a commenter mentioned, the NOSB should not restrict the ability of farmers to develop the best organic system plan for their site-specific conditions. And just as a reminder, the individual's OSP, the organic system plan, defines how you remain in compliance with organic standards. It doesn't set your organic standards.

Solubility versus 3:1. And this was
definitely in -- a concern in a topic that this prop subcommittee spent a lot of time discussing. And there were several public comments about solubility versus 3:1. In general, for solubility, finding a percentage above which a limit is triggered is actually difficult to justify and becomes difficult to test for. Using a C:N ratio seems more complicated, but actually makes setting a limit easier. Highly-soluble nitrogen fertilizers contain mostly ammonia or nitrate forms of nitrogen. These forms do not have carbon associated with them and are immediately plant available and fall below a 3:1 C:N ratio. Organic products greater than 3:1 C:N ratio fit into the category of materials that require soil biotic transformation. To note, these protein and amino acid structures cannot be billed if there are fewer than three carbons to one nitrogen. The law return was also mentioned quite a bit in public comments and oral comments. The law return is important and essential to the organic way of farming, but organic farming as we've heard in other material
discussions, is not the industry's waste bin. Rules and standards foster clear expectations and are in place to protect the integrity of the organic industry and define what can and cannot be recycled.

And lastly, execution and implementation. I do recognize that there were some comments made discussing additional burdens in implementation. However, again, a crop advisor, some certifiers and farmers during oral comments said that the calculations were clear and resembled the steps taken for sodium nitrate. The proposal indicates that certifiers or material review organizations could develop a list of unrestricted allowed materials that could you reference to avoid continuous analysis. While a certifiers comment stated, we request the details of the formulation of these products. If you don't receive the information of these products, we just don't approve them. Last week also Wood made a pretty impactful comment at our public comments,
just saying that bar for approval should be very high. In conclusion, this is a practice standard which is intended for all farms to prevent the widespread use of new non-synthetic, highly soluble nitrogen fertilizers, while also allowing for restricted use of these materials in critical situations expressed by farmers. I will leave you with the words of one farmer. The intent and goals of organic agriculture have helped to develop agricultural systems that will provide food over the long-term in ways that build our ecosystems, not reduce them. Organic practices are not simply a way of trying to maximize food production now, but they are in place to maintain food production over the long-term while building and protecting the resources required to grow the food. That commenter ends with please stop and take a step back and think about what an organic system means to use as you consider your vote. And with that, I turn it over to Nate or sorry, maybe Rick.

MR. GREENWOOD: Yes. No, that's fine.

Again, Amy, thanks for a great overview. I really
appreciate that. So open it up to comments and discussion from the Board.

MR. TURNER: I just wanted to ask the question you know, there were some comments that have indicated about the bookkeeping burden that's created by this proposal, the farmer -- the burden on the farmer and I just -- it was hard for me to get my head around those comments and I just didn't know if you had any thoughts on those or other folks who might -- who have some direct connection to those comments might be able to speak to that. I mean, it didn't -- as we've deliberated as a committee, it had not been an issue that I was concerned about and then to hear several commenters, either in verbal comments or written comments kind of indicate that was an issue. I wanted to just hear you speak to that, if you don't mind.

MS. BRUNCH: Yes, absolutely, Wood. I'll start actually on that, and I would just invite the other farmer members of our Board to weigh in
with their perspective as well. Yes, there was a wide range of comments on that particular issue, kind of indicating that every fertilizer will have to be analyzed to, or every nitrogen fertilizer will have to be analyzed to. Hey, we'll just check a box and say we don't use this and away we go.

So, you know, in summary, really, this is geared towards those fertilizers that farmers can see that have that high nitrogen component to, and it's not geared towards for as many where compost teas, composts, those traditional sources of fertility that organic farmers are using. This is geared towards sodium nitrate and some of these new complex lens that are coming down the pipeline.

So this is -- there were some farmer comments that said this is pretty -- it resembles calculations of sodium nitrates. And that is true. It can be just very simple, where it does get a little bit complicated is in these materials that are complex formulations. So it's not just a sodium nitrate product. It's a product that has several components and in these components there are
substances of high solubility. That is where there is a little bit of extra work to be done. We'd need to deconstruct these materials into their components and figure out what each component contributes to the 3:1 ratio. If one is above a 3:1 ratio, then that's where the restriction comes into play. So that's where the extra work does happen. And, you know, for me and my farm, I don't necessarily have to worry about that. I'm not going to be using these materials and I speak mainly on behalf of most the Midwest farmers. These are cost prohibited for us to use. We have to be resourceful, and use other ways, propagation, manure applications, in order to economically produce our organic crops. Others though, that do need to use these, they will have to: one, know what they're putting on their farms, and two, a certifier is going to have to also understand what is getting put onto these farms. So I don't want to go -- I could go a little bit further into this, but I wanted to open it up to the other farmers real quick, and then we'll go back into the
MR. GREENWOOD: Okay. Wood, you're okay?

MR. TURNER: Yes. Rick, I had my thumb up, yes.

MR. GREENWOOD: Okay. Yes, I couldn't see you there. Okay. Nate?

MR. POWELL-PALM: Just jumping if I might speak to Wood's question a little bit more. Any burden realized from this will be on certifiers. Certifiers to the material reviews, this is not a farmer burden and full stop.

MS. GRAZNAK: As a farmer, whenever I want to add a new product, and it doesn't matter what it is, I submit that product request to my certifier and they do the back end work to make sure that it is able to be approved. So I don't feel like it's going to be any extra work for me, other than what I'm already doing, I guess, is what I could say from my perspective.

MR. GREENWOOD: Okay. Thank you. Allison?
MS. JOHNSON: Thank you. I just wanted to kind of tease out one observation. I've been working on this report on the benefits of organic for several years, so it's hopefully nearing it's finish, but I was looking back at 205.105 last night and I just wanted to highlight that that's really where the core approach to inputs and materials in organic lives, it's where the big three prohibition is, it's where the overarching prohibition on synthetics is, and the rest of the connections to the national list. So to me it's a big deal to add something to 105, but I do think it's the appropriate place for this because it's -- my understanding is this is a signal that fundamentally we're not focusing on quick fix inputs, we're emphasizing use of compost, and crop rotation, and cover crops and all of the things that build soil health over time and so this would be added as a core principle.

MR. GREENWOOD: Okay. No, thank you. Javier?
MR. ZAMORA: Morning, you all. I think this is a little touchy subject as far as organic growers. I'm thinking of the small mid-size against the larger growers. I think there was something said that it's not just the nitrogen. I think there's -- it's not just the nitrogen in the fish. I think there's a little more beyond the nitrogen, that it's included in this new way of getting nutrients or nitrogen in this case. And I really think that there's some really good certifiers that look at details on how it's made and what's, you know, what the advantage for different ways of growing crops is puts a burden on them and it also makes it in a way more flexible for the ones that might not be enforcing the rules as good. Grower we see new products coming out in the market that are always -- who are being told that they're better. They help us grow things faster and they will give us better yields, sometimes not really knowing how those products are made. So it could be sometimes misleading. And I can tell you that, you know, the ratios
sometimes mean very little to us. We just want to make sure it works. But we might be adding something that it's -- is not going to be benefit for the environment. So this is where we need, you know Board members, a little more higher educated than myself to really understand how these nutrients, how this nitrogen, it's being created, and how it's being utilized, that perhaps in the future or even right now might be given a leg up to the larger growers versus the small family grower that might not really -- not that doesn't have access to it, but it's not so available to them. So we have to think a minute. So I think there's just have a lot to talk about and listen to everyone as we're doing. But I'm still a little concerned about how this whole ratio will work and what the burden would be on growers. I'm glad that Nate saying that will be on the certifier, but that's a concern that I have. I'm really, really enforcing what we're hoping for here.

MR. GREENWOOD: No.

MR. ZAMORA: Thank you.
MR. GREENWOOD: Thank you. No, sir. I always good to get your perspective, Logan.

MS. PETREY: Okay. All right. I'm not going to go on a big soapbox, I promise, but I will go ahead and admit it, I was the one who voted no on this. I think you all are probably not very surprised. But anyway, because I was also the sole one to vote for ammonia extracts and I just want to make a quick statement. Just because a grower uses or has a need for high soluble nitrogen does not mean that cover crops and proper rotations are not used. That seems to be a misconception. It, you know, it may be cost prohibitive for certain types of grower, but it just completely cost prohibitive for us to have pale leafy greens that get harvested, rejected, that could cost like 20 grand an acre in crop loss. And so I actually am in favor of a 20 percent regulation because I do believe in the holistic system. I mean, we see it on our farm. And so I'm in favor of that.

My hesitation for voting that in is
because of who decides who the crop needs are. You know, the references that we have are from, you know, universities that could be very behind on organics. And it gets complicated that is it the percentage of nitrogen or are they available, you know, does all of it become available. I think it is very complicated. We do it with sodium nitrate already. And so, yes, my hesitation started with who's going to tell me that that amount is, but after talking with some Board members and certifiers, it's going to be a negotiation with the farmer and -- from what I understand. And it currently is now. I haven't had any problems with it with any inspectors. And -- but I will say in the proposal it recommends that carrots are getting 100, 150 pounds of nitrogen and that's not what we use. And so as long as it -- there is a discussion with the grower and what are you trying to obtain you know, it makes sense. You know and so as long as you know that is accommodated, it's fine. I agree with the 20 percent grow, everyone agrees with the 20 percent, you know. And most

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of the growers that even recommended the AE agreed with that 20 percent. So no, it's not as debatable as the other, you know -- as the other, petition that we had. So I'm sorry to be long-winded, but I do want to get that out that -- yes. We still do use cover crops and we still use other things. It's just -- it's a different farming system that requires something very quickly in -- and the crop loss timing can happen within a few days and the release curve on some of these natural can take two weeks depending on the temperature, you know, even if the temperatures get to the appropriate time. So thank you for the time.

MR. GREENWOOD: Okay. Thank you, Logan. Kyla?

MS. SMITH: Yes. Thanks, Amy, for your continued work on this. As Nate pointed out, us certifiers will be probably the most impacted. And I would just say that, you know, depending on a particular type of operation, you know, and what you grow, you may or may not be impacted by this. But as a certifier, we have to apply all
of the parts of the regulations to all the operations to figure out where the impact is and so that's the burden that we carry. And I feel like a lot of times, you know, with a lot of things within certification, it does fall to the certifier to implement and to enforce. And so because of that, I'm always looking at what's the impact that this is going to have, and is that impact worth it? Because every time it seems to be like, oh, well, this is going to fall -- like certifier has to figure out certificates, acreage on certificates, the certifier has to figure this out. SOE, there's going to be tons of stuff for the certifier -- for us as certifiers as to figure out. So every time we're -- I just want -- for me, that's my lens and that's what I'm constantly trying to address is what's the impact to the -- you know, to the organic industry as a whole and is that impact is going to be worth it? The answer could very well be, yes, absolutely but that's sort of the seat that I'm sitting in. And then I just have a very specific
question, and that is that, I saw in the public
closest a lot of confusion around whether or not
guano was a focus of this. And it seemed like to
fall on both sides of the fence and so that's a
question that I've been getting from certifiers
and how specifically to evaluate that, and so I
didn't know if you guys could -- if anybody could
speak to that.

MR. GREENWOOD: Okay. Yes. Thank
you. Just one comment. So I also live in a
regulated world from FDA with a medical device
company and there's always pain with new
regulations, but that's part of the cost of doing
business. So we complain and they throw new things
on us and we have to hire more people to do
regulatory affairs. But when you live in a
regulated world that's a reality. So, Nate, why
don't you go on and then we'll finish up with Amy
answering the questions.

MS. SMITH: Could I say one thing back
to that, I totally agree with you. However, I do
think there's a lot of talk around keeping the cost
of certification low. And so that's sort of the
balance point about like we as certifiers need to
implement all of these additional things which will
largely require new staff or more training and so
the costs of us doing business increase and then
the way that we can increase our cost, unfortunately, at this point is to pass that along
to operators. And so there is just a balance point
there that we're all talking about already. But
it's just a little bit tricky.

MR. GREENWOOD: Yes. No, I agree but
it does cost a lot more money every time somebody
comes up with a great idea, it costs more money
there's no question about it and how you can pass
that on or not and maybe that's where NOP can come
in, in terms of maybe more funding for all of us.

Anyhow, Nate, let's do that.

MR. POWELL-PALM: Thank you. I'm
going to kind of bridge a little bit between Javier
and Kyla. I think one thing certifiers do really
well, and I say this from experience, is material
review. They spent a lot of money, a lot of time
really tackling the review of materials. So to Javier's concern that some certifiers might enforce this differently than others. The consistency across certifiers is admirable and it's where they put a lot of the resources and time.

So I would say that's not so much a concern that I would share, but rather confidence that I have that this gives good boundaries to certifiers to be able to effectively manage this growing world of novel fertilizer products. In doing so, they make more fair marketplace, but I do want to give just the greatest accolades to certifiers because as Kyla said, this is a lot of work and I really appreciate the certifiers that are eager to jump on this and willing to help us out.

MR. GREENWOOD: Okay. We have Amy and then Carolyn and then Brian, and then I think we need to wrap this up and move on.

MS. BRUNCH: Actually, Rick, I'll just defer to the end just in case Carolyn and Brian have some additional questions.

MR. GREENWOOD: Okay. Carolyn?
DR. DIMITRI: Yes. My question is actually for Logan. Logan, can you talk a little bit more about, you know, the scenario that you gave is, like, is that crop-specific or is it like region-specific or is it depending on the weather?

MS. PETREY: Yes, I think all of the -- it is specific to all of that, Carolyn, because you'll have growers in very arid climates. And that won't need a high soluble nitrogen rescue treatment and that stated in the sodium nitrate as, you know, in the discussion of it is that these things happen. But in certain areas no, that doesn't happen. And it doesn't happen with us every season. So we don't use it in every planting that we have. But the condition would be like a spinach, which is a 40-day crop. And then two weeks prior to harvest we get a four-inch rain. And then a few days later you're going to start to see it pale unless you respond immediately after with a high soluble nitrogen, that it can immediately take up. But if you were to apply an organic fertilizer or an organic, you know, natural
fertilizer, you could be waiting 7, 10, 14 days
for that fertilizer to break down to become
available, and then to be uptaken by the plan.
And by then, you get pale and it's really hard to
bring a crop that's only 40 days old, you know,
in age to recover. The time frame is very crucial.
So that's just an example.

DR. DIMITRI: Can I just ask one
follow-up question? Thank you. That was really
helpful. So I think you told us yesterday or some
day that your company is moving its production
because of like climate concerns. So could we draw
the conclusion that as we see climate change
affecting agricultural more seriously over the
next coming decades, that the use of something like
this might become more important as producers start
shifting what they're growing and maybe the regions
that they're growing. It's a speculative
question, I know, but --

MS. PETREY: It is, it is, but I've been
to multiple conferences and produce, you know where
there's a lot of California western companies that
need or think long-term, how are we going to get
to the east coast? It's just a harder area to grow
a certain things and not many have succeeded, you
know, I bet a lot of them have failed just because
the prices have to be different. So yes, I would
say logistically, you know, dealing with the
freight issues that we already have and then with
the water restrictions, I know our companies, you
know, everybody's in water restrictions. I know
Rick can speak on that, so I would say yes.

DR. DIMITRI: Thank you, Logan.

MS. PETREY: Thank you.

MR. GREENWOOD: I have Brian and then
Mindee and then Amy.

MR. CALDWELL: I think this is for Amy.

There were a few comments that were specifically
focused on the the wording of the motion. And it
says these materials are three -- with the C:N ratio
of 3:1 or less are limited unless use is restricted
to a cumulative total of 20 percent of crop needs.
But I think what is actually meant to be said
there, they are, restricted to a cumulative total
of use of 20 percent of crop needs, and this whole
little phrase there are limited unless use is
restricted. It's a little bit redundant and a
little bit confusing because you know, it says
they're limited, but it really means that you can't
do it unless the cumulative -- you can't use them
for more than a cumulative total of 20 percent of
crop needs. Do you see what I'm saying here? That
the wording is a little clumsy and I'm wondering
if we can fix that in the cover letter or just make
it very clear that -- exactly what the meaning of
that is there.

MR. GREENWOOD: Okay, thank you. And
I'll let Amy respond, but, Mindee?

MS. JEFFERY: Go ahead, Amy.

MS. BRUNCH: Oh, okay. I guess
specifically to Brian, yes, I did actually see that
as well with some commenters and my opinion and
that can be confirmed by anybody in this call is
that, you know, we -- the intent of the motion is
there to make it a little bit more clear on a
non-substinent change I think is definitely in our
purview, but the intent is that they would be
restricted or, sorry, prohibited and then
restricted to a cumulative total of 20 percent of
crop needs.

MR. GREENWOOD: Great, thanks. Yes.
Okay. Mindee and then Dilip.

MS. JEFFERY: Thank you. I really
appreciate all the work and all the sides and all
the depth of thinking that we have to go through
and work like this. And I just wanted to say that
I see this proposal as functional compromise. And
organic farmers are conducting the symphony of the
soil, and that's what we want. And I really see
us as being on the yellow brick road with this
proposal.

MR. GREENWOOD: Okay. Thank you.
And then Dilip, and then back to Amy to sort of
wrap this up.

DR. NANDWANI: Okay. This is a very
fascinating discussion for me. And it can go on
and on, but I have a just a comment, not a question,
what has been said, and probably it goes to the
roots of our principles of organic agriculture. So if the higher nitrogen source coming from off-farm input, you have to look at that to keep that in mind. And if it is really low, like Logan said that, and then if we provide then plants will have to wait for a lot of days. And by the time the nitrogen is received, they may not perform accordingly. So I'm just wanted to say that the principle using the on-farm input, it's, where we are looking into that and the balance between the quantity, low versus high. That's the important point to keep in mind. That's all I wanted to comment. Thank you.

MR. GREENWOOD: Thank you. So, Amy do you want to wrap this up? And then I guess we go for a vote.

MS. BRUNCH: Yes, absolutely, Rick. And I appreciate the comments. Also, just the diverse panel of farmers that we have here. Kyla's comments that represent certifier's point of view. I think this was really helpful discussion, Dilip, and Brian, as well, and Mindee. Just kind of in
general, I think that was a great term that Mindee had mentioned kind of a functional compromise. I've had the ability to farm not only in Nebraska, but in the US, in Florida -- South Florida, Texas, and there -- I mean regionally, there are experiences that happen that isn't a one-to-one comparison for farmers. That's why I think that this is important we recognized that, the community recognizes that. And kind of as Logan mentioned, you know, this is -- it points to a comprehensive system and then supplementation when those environmental moments do occur to regulate the usage of these particular items.

So I think that the intend to the motion is very clear. I really strongly want everybody to think about right now, doing nothing, these are unregulated. These are considered non-synthetic substances that can be used with unlimited amounts.

So what we need to do and think about is putting these guardrails to offer more clarity in the situation. I know that maybe this isn't 100 percent perfect in terms of clarity, but, right
now, again, there is just no rules, no regulation, and it is up to the interpretation of certifiers. So this at least gives some reference to what can be allowed, what's prohibited, and then what's restricted.

In terms of materials, there's a great chart that was put into the proposal. And there's a delineation, really, of substances that are above the 3:1 and below. Sodium nitrate and guano, Kyla, that was part of your question. Guano is right on the edge, and that one is probably the greatest of all materials that are currently in circulation. Everything else is clear and guidance can be issued. So this re-analyzation every year of these substances does not need to take place. So really looking at MROs to be able to provide that guidance. But again, this is to put some boundaries on materials that are unregulated currently. And I think this is really no different than what we've done with excluded methods yesterday. And also our approach to bio-waste films that we've done in the past as well. So with
that, in the interest of time, I'll turn it back over to Rick.

MR. GREENWOOD: Okay. And I guess what we need to do, Nate, is call for a vote on this.

MR. POWELL-PALM: Yes.

MR. GREENWOOD: Okay.

MR. POWELL-PALM: So we have a motion. Motioned by Amy Brooke, seconded by Brian Caldwell. And we are going to start the voting with Liz Graznak.

MS. GRAZNAK: Yes.

MR. POWELL-PALM: Kim Huseman?

MS. HUSEMAN: Yes.

MR. POWELL-PALM: Mindee Jeffery?

MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison Johnson?

MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip Nandwani?

DR. NANDWANI: Yes.

MR. POWELL-PALM: Logan Petrey?

MS. PETREY: Yes.
MR. POWELL-PALM: Kyla Smith?
MS. SMITH: Yes.

MR. POWELL-PALM: Wood Turner?
MR. TURNER: Yes.

MR. POWELL-PALM: Javier Zamora?
MR. ZAMORA: Yes.

MR. POWELL-PALM: Amy Bruch?
MS. BRUNCH: Yes.

MR. POWELL-PALM: Brian Caldwell?
MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry D'Amore?
MR. D'AMORE: Yes.

MR. POWELL-PALM: Carolyn Dimitri?
DR. DIMITRI: Yes.

MR. POWELL-PALM: Rick Greenwood?
MR. GREENWOOD: Yes.

MR. POWELL-PALM: And with great gratitude to certifiers, the chair votes yes.

MS. BRUNCH: That's 15 yes, 0 no, 0 abstain, recuse, or absent. The motion passes.

MR. GREENWOOD: Okay. Thank you, everyone. So we'll go on next to Logan Petrey on
the proposal for carbon dioxide, which is petitioned.

MS. PETREY: Thank you, Rick. All right. Okay. So carbon dioxide then it was being received a petition, requesting, is it synthetic carbon dioxide at 205.601 allowed for the use at (a) which is an algicide, disinfectant, sanitizer. And (j) as plant or soil amendments. Carbon dioxide is understood to be a material with inherently low risk and is also approved as a processing aid. Okay. And soils with -- so the use of it in soils with high pH, applying water with a reduced pH can increase nutrient availability and increased plant health. Additionally, the activity of carbon dioxide and water can help prevent clogging of irrigation systems by algae and other plant contaminants. The water pH adjustment can be manually control as well as automatically controlled, by adding a pH probe and controller that adjust the CO2 injection to maintain target pH values.
Alternative uses with mentioned were sulfur burners and citric acid because water pH cannot drop below 5.0 when carbon dioxide is used as an acidifier. This method may be considered more secure as a pH adjustment compared to alternatives. Which we did see, the -- some commenters orally and on the written comments suggest that as well.

Carbon dioxide is prepared as a byproduct of manufacturing of lime during the burning of limestone, combustion of carbonaceous materials, also from fermenting processes which would be this, you know, where we would get some non-synthetic sources. And so the question has also been: Why don't we used non-synthetic sources? Some of the commenters were great to mention that the infrastructure to support logistically and storing that carbon dioxide is not available. And so therefore, the necessity of synthetic is there. And we also see that with the handling of carbon dioxide material.

Other comments, one commenter was completely against the addition, but also, you
know, was questioning the need of irrigation too.

So so I do think, you know, when we are using irrigation, you know, we are, you know, in need of but -- and then three commenters where against the addition without the annotation or without an annotation demanding that the material be manufactured strictly from a byproduct. Kind of similar to what, you know, I have squid byproducts.

So that was a recommended annotation. And then five commenters were in support of this material as stated. One commenter, QCS was in support was material however stated strong concern for the lacking discussion of carbon dioxide at 205.601(j) as a plant or sole amendment in the proposal and a petition recommending that the proposal be sent to subcommittee, which I know that's been some of the concerns and some of the comments, questions, and Board members. Are there any other comments?

MR. GREENWOOD: Comments? Yes, Brian.

MR. CALDWELL: Yes. I guess I agree with some of the comments that said that the use
for carbon dioxide as an algicide or sanitizer was really well covered and I think it's done very -- seems like a positive decision there, but the -- how it could be used as a plant or soil amendment is really unclear. And so if we pass this as is, we're going to -- it seems like we're going to be passing the (j) part of it as the plant or soil amendment and without any discussion. And I'm uncomfortable with that.

MR. GREENWOOD: Thank you. And, Nate.

MR. POWELL-PALM: I just wanted to give a big shout out to Logan who took on a proposal very early on in her NOSB career and has just slayed it.

MS. PETREY: Well, I wouldn't say that.

MR. POWELL-PALM: I think you have.

MS. PETREY: That's for new members.

MR. POWELL-PALM: The rest of the Board and so I don't -- I wanted to just recognize that it's a lot of work. And you've been stellar, so thank you for all you put into this.

MS. PETREY: Yes. Thank you, Nate.
MR. GREENWOOD: Dilip?

DR. NANDWANI: This is a good work, Logan. And I just have a quick clarification, if you may. You are talking about the solid, as well as the liquid -- sorry, the gaseous form of the carbon dioxide, correct?

MS. PETREY: Yes.

DR. NANDWANI: Thank you.

MR. GREENWOOD: Mindee?

MS. JEFFERY: Thank you. Good work, Logan. I really appreciate you and all your dialogue as a Board member and I feel similarly about (j) wanting a little bit more depth of understanding there. And if we do end up doing more work on this, I might just need help understanding what it means on the natural uses because it will help me understand the specific need on the synthetic uses. And so if I miss something there, I apologize, but if we do go back to work on this, that would be some information I would love to know more about.

MR. GREENWOOD: Kim, did I see your
hand up or --

MS. HUSEMAN: You did, but then I lowered it. I'm getting the impression that there's -- and I have the reading through the comments as we're going through just had had similar concern as used as a plant or soil amendment and how that's incorporated. So I know this is about the subcommittee item.

MR. GREENWOOD: Yes. Well, that's what I was going to suggest because we have -- people are concerned about (j) as a plant or soil amendment. So what I'd like to do is basically call for a vote to see if we want to bring it back to subcommittee and get some clarity for that before we vote on the petition.

MS. HUSEMAN: I second that motion.

MR. POWELL-PALM: Okay. So Rick motions to send this back to subcommittee, seconded by Kim. All right so in the vote to send back to subcommittee, we're going to start with Kim for the first.

MS. SMITH: Nate, Sorry.
MR. POWELL-PALM: Sorry. Go ahead.

MS. SMITH: Is there any more discussion?

MR. POWELL-PALM: Every time -- I will give this right.

MS. SMITH: That's okay. I'm going to be the Robert rules --

MR. POWELL-PALM: I appreciate you.

MS. SMITH: -- and not be, since I've been charged of the vote -- counting the vote. I just had a quick clarification in that we're sending the whole thing to vote. The motion is to send the whole thing back; is that's correct?

MS. PETREY: From what I understand, they won't pass anything through without it grouped. So that's the only reason why I don't want to a hold it up. But from my understanding, it needs the entire thing.

MS. SMITH: Okay. I just wanted to clarify the motion on the table. Thank you.

MR. GREENWOOD: Okay. So I guess we're ready to vote then.
MR. POWELL-PALM: All right.

Starting out with Kim.

MS. HUSEMAN: To move this back to subcommittee, my vote is yes.

MR. POWELL-PALM: Thank you. Mindee?

MS. JEFFERY: Yes.

MR. POWELL-PALM: Allison?

MS. JOHNSON: Yes.

MR. POWELL-PALM: Dilip?

DR. NANDWANI: Yes.

MR. POWELL-PALM: Logan?

MS. PETREY: Yes.

MR. POWELL-PALM: Kyla?

MS. SMITH: Yes.

MR. POWELL-PALM: Wood?

MR. TURNER: Yes.

MR. POWELL-PALM: Javier?

MR. ZAMORA: Yes.

MR. POWELL-PALM: Amy?

MS. BRUNCH: Yes.

MR. POWELL-PALM: Brian?

MR. CALDWELL: Yes.
MR. POWELL-PALM: Jerry?

MR. D'AMORE: Yes.

MR. POWELL-PALM: Carolyn?

DR. DIMITRI: Yes.

MR. POWELL-PALM: Rick?

MR. GREENWOOD: Yes.

MR. POWELL-PALM: Liz?

MS. GRAZNAK: Yes.

MR. POWELL-PALM: And the Chair votes yes.

MS. PETREY: That is 15 yes, 0 no, 0 abstain, recuse, or absent. The motion passes.

MR. GREENWOOD: Okay. Now we're on to 15 sunsets, for review for the crop committee. The first one is soap-based herbicides, and that's actually mine. Soap-based herbicides have been around for a long time, they're reasonably popular, although sometimes I wonder how effective they are, having used them myself. Written comments actually were positive for keeping it on. No one is particularly against them. They're basically just a fatty acid that has been saponified, turned
into a soap. There's general agreement internationally, they're on the list, and they turnover very quickly in the environment. So there really aren't any environmental concerns for them, it's just, you know, another use of something that's fairly benign. So I'll just stop there and see if there's any questions about herbicides, soap-based. Okay. Seeing none. I'll go on to Logan and biodegradable, bio-based mulch films, which we seem to talk about all the time.

MS. PETREY: We sure do. Okay. So I'll pick this up from Ace's. There was a hot topic of new Board members last year, because the annotation was changed to the 80 percent and we voted yes on that. That was yes for ten and I have four nos on that record. I don't know if that was right, somebody abstained. Anyways -- and so -- did we only have 14 members, but -- I'm getting off track. Okay. So biodegradable bio-based mulch film is used to suppress weeds, conserve water, and facilitate production of row crops. Past commenters have acknowledged that there are
currently very few options other than difficult-to-use paper mulch for the 100 percent bio-based BBMF, but have generally felt this listing should remain despite that there's no 100 percent. However, at the fall of 2021, we voted to allow 80 percent because there are some on the brink to be allowed. And so this use is going to be to help, you know, with the incredible amount of plastic that is used and thrown in the landfills. And this is one of those that is a compromise. And although there is concern of what is lingering, you got 20 percent there, we're hoping that innovation really takes over in the marketplace and people will want, you know, to get closer to that 100 percent. But the question was, is there any new information on the availability of 100 percent and through the commenters there's been none available. So thank you, Rick.

MR. GREENWOOD: Thank you. Any comments, discussion about that? So do we say, we've talked about bio-based mulch seems like, or at least for me for about the last five years, but
anything -- I think this one now is fairly straightforward since we've had the other discussions. Okay. Seeing none, we'll go onto boric acid and that's Wood.

MR. TURNER: Thanks, Rick. We have a listing at 205.601(e) for boric acid as an insecticide, including a keracide or mite control. And also, include the boric -- I think it's also for structural pest control, with no direct contact with food or crops. This is material that we had heard from many, many in the community about in terms of it's -- the -- it's a necessity, I think in controlling ants and roaches in particular. You know, it's been -- there's been healthy debate on it over the years in terms of the fact that it's a material that you know, it's not entirely benign, although generally regarded as safe, but it is, something that -- there are -- it is considered to be preferable to other alternatives for these kinds of uses. There was, again, general support as there has been over the years for maintaining the material -- maintaining access to the material.
There was one statement of opposition and then one, I thought, compelling comment about potentially looking at the material annotated to clarify the use of it to avoid, let's see, to focus on the use of it as a gel, not in other formulations. So it may be worth looking at that in subcommittee in more detail. The suggestion around the gel usage was potentially in the context of a limited TR. That's all I have.

MR. GREENWOOD: Okay. Thank you. Any questions, comments about boric acid? Okay. Seeing none we'll move on to Mindee again, sticky traps and barriers. This is 205.601(e) as an insecticide basically it's used in pest control and monitoring. And also used with traps as of production age. Doesn't come into contact with food so it's used in limited quantities and sometimes on tree trunks. The listing covers a wide range of traps and coatings. But there is some of the sticky traps do have petroleum wax, but overall, again, a very benign compound or I guess you can call it a compound. And generally
positive comments on the written comments. So I will stop there, see if there's any comments from our group. Okay. Seeing none we'll go to elemental sulfur and that's to Brian.

MR. CALDWELL: Okay, well, this might take a few more minutes, I don't know. But the situation with sulfur, once again, it is used very, in a lot of different applications within organic agriculture. And this at 205.61(h) was a new addition in 2019 as slug or snail bait. And the -- in terms of the comments, basically, there were five comments in favor of relisting, one against, and one that said more review was needed, and a couple of them said that even though it wasn't widely used according to some of the surveys that some of the certifiers did. Since it was only available since 2019, we need more time to see if it -- if the grower community will actually take up, use this product more. The somewhat confusing or somewhat tricky issue comes in with the inert ingredients. And these products are made with basically 99 percent inerts and it kind of just
once again raises the importance of us being able to deal with inerts in these formulations.

And the reason it's so important here is that the sulfur use seems to be very safe and have very little environmental impact. And there is another product that uses ferric phosphate for the same purpose as a slug bait. But what has been -- what has come up is that the inerts -- that one of the inerts that's used with that is a EDTA chelator, which is on the old list four, so it was -- it's sort of de facto in use and approved, but it makes the the ferric phosphate toxic to dogs. And I think there have been some issues where dogs, you know, gotten sick and I don't know if they've died. But anyways, it has been an issue that was brought up. And in fact the history of this is that the ferret phosphate product was brought up for a relisting under the sunset reviewing and almost voted down, but it was felt there was no alternative to to ferric phosphate. And since Notta (phonetic) was becoming more important in
organic and that tends to lead to more slugs and
snails we wanted a product. But anyways, to make
a long story short now, with this sulfur-based
product for slug management, there is an
alternative to ferric phosphate, and so it may
change that whole situation. But the fact that
99 percent of the ingredients in these sulfur-based
or ferric phosphate-based products, 99 percent are
inerts. And in the ferric phosphate, the inert
has -- the interaction with the inert and the active
ingredient has made the product toxic to dogs.
These are important issues and it is totally
unknown what the 99 percent inerts are in the
commercial elemental sulfur slug baits.
Evidently according to the MSDS, some of them do
contain iron, but we don't know if it contains EDTA.
It's just filling a little bit of 99 percent black
box. So just to sum up very quickly, I sorry, I've
taken so long about this, but as usual, seems like
the more you delve in the more difficult it gets.
But the actual elemental sulfur active ingredient
in these products seems very benign and safe and
has low environmental impact. But we are once again commended to really do something about our inert situation. So that's kind of a side issue. That's really not the focus of this elemental sulfur, but it just brings it up very clearly.

MR. GREENWOOD: No. Thanks, Brian. We went through the same thing. I don't know if you were on the Board with the other snail bates and iron and the whole area as you know we struggled with is inert because they're not inert and that --

MR. CALDWELL: Right.

MR. GREENWOOD: -- they were misnamed at the very beginning, but we are, you know, we're to look at the key ingredient, which is either the iron or the sulfur. And so that's how we evaluate these. But obviously more work needs to be done.

So any questions or comments for Brian? Okay. I'm seeing none. We'll go to Jerry, and he's obviously Mr. Copper and he has copper, fixed and then copper sulfate. So, Jerry.

MR. D'AMORE: And with your
permission, I'm going to do, both of these at the 
same time. We're not voting on them. Obviously, 
I won't get away with that next --

MR. GREENWOOD: No, I think that's fine.
MR. D'AMORE: Thank you. So the 
205.601, copper sulfate, coppers, fixed both as 
plant disease control. At the spring session, I 
will review the two materials together as they are 
both plant disease control and they share the same 
annotation. They also share the same 1995 TAP and 
the same 2011 TR. Further, our stakeholder 
questions for these two sunsets are exactly the 
same. Lastly, I presented copper sulfate at the 
fall of 2021 Board meeting for two distinct uses 
in aquatic rice systems and they were given another 
five years and I'll try to make that relevant in 
a minute.

The next part is something I wrote over 
the weekend, and I think has become a little bit 
more apropos in the last couple of days, and 
actually this morning as well. During the 2021 
sunset process, there was a relatively small, but
very persistent stakeholder group that expressed
the opinion that we the NOSB was rubber stamping
the coppers through the process and giving little
space to continuous improvement and/or innovation.

The 2021 research priorities proposal that was
presented at the October 2021 Board meeting was
helpful to show NOSB concern. There were four
bullet points I'd like to highlight.

Number one, comprehensive systems
based approach for managing individual crops in
a way that decreases the need for copper-based
materials, including research, crop rotations,
sanitation practices, plant spacing, and other
factors that influence disease. Number two,
breeding plants that are resistant to diseases that
copper controls. Three, developing alternative
formulations from materials containing copper, so
that the amount developmental coppers is reduced.

And four, developing biological agents that work
on the same diseases, coppers now used on.

Continuing, we have asked for a new TR
for these two sunset, which should be delivered
this June and thus available for our consideration during the sunset period. The lead paragraph to the four-page request for TR reads as follows: The review of the 2011 technical report on copper sulfate and other copper products highlighted five areas that should be expanded on an updated with the latest research. Number one, human health concerns, soil health and microbiota, application rates and accumulations in the soil, copper in the aquatic environment, and alternatives to copper-base products. In response to the two copper sunset documents presented a day, there were 30 stakeholder comments with the overwhelming majority being written. This is the last thing I'll say and I'll say it very carefully. There was not one comment, written or oral that I could find that advocated for removing coppers during the review process. To be clear, there were quite a few that would like to see this material phased out over a longer period of time, but not a single one advocating its removal this go around. So I'll leave it there. Thank you.
MR. GREENWOOD: Thanks, Jerry. And I think that's, you know, we see copper in a lot of other compounds, where we don't really want to use them. But until we get alternatives we're sort of stuck with them. So any comments for Jerry about copper, we've discussed copper quite a bit as you know. Okay. Javier?

MR. ZAMORA: Yes, copper is one of those things that growers need specially that cranberry, the apple growers, and some other people. And I'm in an array of usage in that, but I think it's a tool that we need, but I think we need to think of the future because the remnants of it is in the soil, I mean, it's copper. So I think as a Board we have to think of that, and I just keep pushing it for newer Board members or new generations to deal with it. I think, you know, I can only think of the metal bromide how it has been, you know, as new products come out for people that need it are developing new substances of new gases that could potentially help those growers. But copper is, it's -- we got to
think about the future. So just keep it in our minds and do something about it.

MR. GREENWOOD: No. You're absolutely right. And I think that's part of why we asked for the new TR and for the research, one of the research priorities. Okay. Yes. Thanks, Javier. So we now have polyoxin D zinc, and that's Brian again.

MR. CALDWELL: Thanks, Rick. Polyoxin D zinc salt is a synthetic, but it is based on a natural substance from soil microorganisms. But the zinc is added to it to prevent it from leeching and make it more effective in its use as a fungicide. And in terms of the comments, I counted 11 for re-lifting, one against, and another one urging more review. The overwhelming statements for -- from the growers, in the grower groups was that it's effective. And that's important because just as -- we just talked about copper and products like this, which are basically of natural origin, sometimes needing some tweaking, like the zinc salt, part of this one,
but they're becoming more and more common. And there's a lot of research going on with them. And they really do have the potential over the long run to reduce the amount of copper that is used in vegetable and fruit production. So that's very a positive thing. The growers are really wanted to keep it for sure on the list.

Now there were some questions that we put out there to the community. And the first one was: Is there concern that cross-resistance to polyoxin D, with some potential human health products. Is that a concern? And we didn't get much response about that. A couple -- in a couple of places, they said, well cross-resistance to products that currently do not exist, is not an issue, but if new closely-related products are started to be used for human health, then it becomes an issue. So currently it's not an issue, but it might be in the future. But for now, we don't need to be concerned about that. So essentially, I would say that the kind of -- the responses that we got were that it's a benign substance and it's
very effective. And so that's pretty much the summary, I believe, of the comments.

One thing that I did want to mention, one comment talked about a study that showed chromosomal aberrations in hamster cells. And that made me take a second look, but I looked at the primary source on that and actually, it was a study that was cited in EPA document saying that polyoxin should be exempted from residue tolerance and that they had found many -- several other studies that contradicted that. So that, you know, it sounded like something to be a little bit concerned about, but then evidently according to the EPA and these other studies, not. So I think I'll just leave it with that and we -- I just wanted to say that we will welcome more comments on this from the wider organic community. It does seem to be a very promising pest control material that we want to just do the right thing and do it right.

So thanks.

MR. GREENWOOD: Thanks, Brian.

Thanks for the deep dive into the literature. So
I see Logan has a question?

MS. PETREY: I have a comment.

MR. GREENWOOD: Okay.

MS. PETREY: I use polyoxin D, it is a great material. And just to talk about the copper reduction, probably used 80 percent less copper per sprays, because of this material, and it is more -- it is targeted towards fungicides which copper typically is for bacterial diseases but we also use it for fungicides too because there just aren't many things that do work. But polyoxin D really takes it away as using copper for a fungicide and more for bacteria side because polyoxin D doesn't have efficacy. I think it works on a heightened degradation, so when we found that, we really helped the health of the farm because it is specific to the fungicides and it's not killing the natural bacteria that we actually want on the leaf to populate it so that we are more resistant to infection. Also it's not phytotoxic or I haven't seen any phytotoxicity, whereas when we use copper consistently, we will see a tinge
or some kind of burn that you might get with some copper. So I'm huge -- greatly supporting this product. Thank you for the review, it's really good and extensive.

MR. GREENWOOD: Thanks, Logan. It's always great to have somebody on the Board that uses one of these products so you can give us a real data. Any other questions on polyoxin D before we go on? Okay. Seeing none, we go to Amy and humic acids.

MS. BRUNCH: Okay. Thank you, Rick. Humic acid, so this is a synthetic substance allowed for use in organic production. And what we're looking at here is naturally occurring deposit water and alkalide extracts only. So the use of these they can be soil applied or full year applied depending on the specific product and humic acid really affects the soil fertility by making micronutrients more readily available to plants, than contributing actual nutrients to the soil.

So mainly as a catalyst. There's pretty
widespread use amongst stakeholders in the community of this substance. One thing to highlight through environmental issues, you know, this particular substance in general isn't known to cause environmental issues, however, there were a couple of commenters that cited concerns just on the mining manufacturing process in the disposal of this extractant. There was a lot of comments in favor, again, of this substance. Majority of the commenters stated that this does provide benefits to their farms, indicates a widespread use because one certifier in particular said 718 members have humic acids on their OSP. It also helps some of those lighter soils. And just beefing nutritional benefit. OMRI also states there's 251 products registered with humic acid. However, the TR indicates that there's a lack of standard analysis for the substances marketed as humic acid. So you can see that in the comments, some folks said that these didn't provide any benefit. But again, the majority of people said they did provide benefit to their farms and fields.
One additional thing to bring up to light, and I thought this was really interesting. This is looking at the actual extractant itself because there is not a limit on the -- what type of extraction used except for it does say let's say alkaline. Potassium hydroxide is the most commonly used extractant. And as OMRI indicated, there is an assessment that can be done to see if potassium hydroxide has been fortified. But other extractants don't necessarily have framework for assessments. So looking at that fortification piece of synthetic extractions is really important. And that was something that we can also take back to subcommittee to discuss on the particular extractant. The two most recent reviews, though the NOSB found humic acids to be compliant with OFPA and this is been part of our sunset process for quite awhile.

MR. GREENWOOD: Okay. Thank you, Amy. Any questions? Yes, Javier?

MR. ZAMORA: Amy or any Board member, can you guys share a little bit about what would
be the difference between the humic acid's usage as what Logan, (j) on carbon dioxide was talked -- presented because it seems like both -- they do -- they enhance the nutrients available to plants in soil. But can somebody talk a little bit about that? I mean, it seems like --

MS. PETREY: Well, we --

MR. ZAMORA: I don't know. I had another question about that.

MS. PETREY: More of when we request more information about CO2 being a plant and soil amendment. So stay tuned unless Amy, you know, and if you know, I'm going to be a little upset here that we didn't. I'm kidding.

MR. GREENWOOD: Okay. Thanks, Logan.

Amy, anything to add?

MS. BRUNCH: No. Sure. Yes. I'm just -- I'm readily awaiting your deep dive on that, Logan, in particular to the soil. But in terms of this product, Javier, this is, a little bit different. This isn't necessarily a gas. It's an actual physical substance and mainly applied
liquid but can be applied in a soil dry form. This
would just, you know, the comments associated with
it say you can reduce your nitrogen fertilizer,
removes toxins from the soil, it acts, you know,
as a catalyst to make the nutrients that are in
the soil more available and then it works on your
soil structure over all. So you know, that's a
good question. I think this isn't in particular
a fertilizer. It's more of a soil conditioner.
So that's how I'd answer that. Hopefully that
-- does that answer your question? Okay.

MR. GREENWOOD: Yes. I started to see
it as a vitamin.

MS. BRUNCH: Yes.

MR. GREENWOOD: Something, but anyhow,
Dilip?

DR. NANDWANI: Okay. Since Javier has
asked about little information about humic acid
and I've been working on humic acid research past
few years and I'll just add some information for
his sake and I hope it might be helpful. So about
carbon dioxide, Logan has already explained and
humic substances, you know, it's a broad class of organic compounds and it derived from humification of decaying plant materials and microbial residues that includes fulvic acid, humic acid, and humin. Now for your information, nowadays, fulvic acid is also available commercially as well as humic acid, okay? And there is a lot of chemistry in it and I'm not going to go into the detail, but wanted to just a couple of other things that fulvic acid is soluble under all these conditions and the humic acid is soluble at higher pH, but it become insoluble at pH lower than 2. And some benefits, as I already explained, that improves the fertilizer efficiency, or reducing the soil compaction. And also it has a direct, you know, improvement in the overall plant biomass effects on plant growth, and the use of humic substances can in increase this root growth and uptake of some nutrients such as nitrogen, iron, phosphorous, potassium, calcium, and magnesium. So it allows tolerance to aerating stress such as salinity. And it -- I think I'll
stop here. It comes in microbial and-non
microbial as well, ideally. I'll stop there. I
hope this helps, Javier. Thank you.

MR. GREENWOOD: Yes. No. Thanks,
that's good information. So anyone else before
we go on to Amy again? And this is micronutrients
soluble boron products.

MS. BRUNCH: Okay. And thank you,
Dilip. I appreciate your extra comments there.
Yes. On in terms of soluble boron products, this
is as planned course with or this is listed in
205.601(j) as plant or soil amendments and I know
Logan's going to cover the other micronutrients
here. In this particular instance, we actually
did requests an updated TR just to deconstruct
soluble boron products from the original TR in
2010, that was more comprehensive on all
micronutrients. But soluble boron is a crop
micronutrient that can be sole applied or again,
applied full yearly according to the TR, when
compared to other recognized plant micronutrients
deficiency in boron is the most common. Boron deficiency is responsible for significant crop losses, whether in volume, quality and that's an annual thing. So this has been on the national list since it was published in 2000. This one is actually pretty straightforward, majority of the comments were in favor of relisting this. This is -- it's a micronutrient again, so it's a very minor input with a very major implication to farmer's bottom line was one commenter's statement. And it does help the ability to just correct those nutrient deficiencies which is really important in organic production is just to make that well balanced soil. With that and just kind of a brief overview, but I invite questions.

MR. GREENWOOD: Okay. Any questions? Comments? Okay. Seeing none, then we're back to Logan for more micronutrients.

MS. PETREY: Yes, for the others. You don't listen. Okay. So micronutrients, the sulfates, carbonates, oxides or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and
cobalt, that one always catches me up. But at 205.601(j) as plant or soil amendments with the annotation that they cannot be used as defoliant, or sorry, or desiccant. And those made from nitrates or chlorides are not allowed. Micronutrient deficiency must be documented by salt or tissue testing or other documented methods, same with the boron. And although these are micro, they are essential, and we have had over 90 percent support in the oral and -- or in the written comments. So they are required in very small quantities. Although some forms of micronutrients are found in the soil, many producers find deficiencies of some or all of the micronutrients on this list. Listing are made up of both compounds and natural minerals, and after the physical processing such as breaking or grinding, these can be used as micronutrients. Micronutrients are also considered heavy metals, but the annotation prevents contamination by restricting issues to correct a deficiency. And again, we've had overwhelming support for these.
Any questions?

MR. GREENWOOD: Questions for Logan?

Yes, Dilip.

DR. NANDWANI: This is really nice that to hear these lot of micronutrients. Can I quickly ask about this, there are some other micronutrients, also are we going to present separately? They are also very important for, you know, organic agriculture crop production such as maybe iodine or something else.

MS. PETREY: Right. Like silica on it. Sometimes we may see that that is essential or not, but, Jerry, do you know? Does anybody know on that? Or Nate, if there's a come up? I'm not sure if there -- where their sunsets are, but --

DR. NANDWANI: Okay. They may be separate sunsets.

MR. POWELL-PALM: Right, exactly. So in rotation, but -- Kyla, go ahead.

DR. NANDWANI: Thank you.

MS. SMITH: I mean, I think -- correct me if I'm wrong, and all the national list like
up right in front of me, but I think this is -- let me just pull it up before I say something that I don't want to say. Who's going to be quicker, me or Jared? Let's race.

MR. GREENWOOD: Yes, maybe Jared could answer that.

MR. CLARK: Yes. These are the two listings under that micronutrient header, but I will say that, you know, these are synthetic versions of these micronutrients that are allowed.

The non-synthetic micronutrients are allowed by virtue of being non-synthetic.

MS. PETREY: Great answer, Jared. Thank you. Thank you, Dilip for the question, though.

MR. GREENWOOD: Okay. Thank you. Any other questions for Logan? Okay. So why don't we go on then to Wood with vitamins C and E.

MR. TURNER: Thanks, Rick. We have a listing for vitamins C and E at 205.601(j) as plant
or soil amendments. These have been TR in 2015, as recently as 2015. They previously have been bundled with, thiamine or vitamin B1. In the previous sunset review, vitamin B1 was peeled off and recommended for removal from the list. It's my understanding that that material is still in rule-making to remove that material. So there were some comments, persistent comments -- well, one commenter said keep B1 off the list. Take B1 off the list and also take off vitamin C and E but that was the only commenter that we've heard asking for that. I would say the comments have been fairly limited on this. This is a -- these are materials that we all sort of generally know fairly well. I would say that the TR in 2015 was helpful in sort of, continuing to maintain interest in keeping these on the list. But there was a lack of really practical information about how these materials are used. And I think that's reflected in the comments which is very little -- very few comments and very few organizations that have -- growers who are using these materials. There was,
though, I just want to acknowledge one particular, and I think -- and thank this commenter for actually focusing on the question that we asked, which was, you know, help with any practical applications of these materials so that we could really understand how well they're being used. The one commenter did indicate that vitamin C plays and cited research on this, the vitamin C is actually helping protect plants from smog damage and even alluded to the fact that that protection from air pollution damage, you know, had some climate change applications as well. So I just wanted to point that out that I did appreciate that feedback about how this -- how vitamin C can actually be supportive in particular of that particular issue. That same commenter also supported keeping vitamin E on the list as well. So that's what I have for now.

MR. GREENWOOD: Okay. Thanks, Wood.

That is the positive of looking at the written and oral comments, getting all the other perspective, I think. I know for myself, I always got an awful lot out of them, even though there's
2,300 pages to go through it. So it's certainly worthwhile. Any other questions for Wood? Okay. So we'll go now back to Logan with squid byproducts.

MS. PETREY: Thank you. All right. squid byproducts at 205.601(j) as plant or soil amendments with byproducts from food waste and food waste processing only. And can be used with a pH to justify -- to adjust the pH, excuse me, with sulfuric or citric or phosphoric acid. The amount of acid shall not exceed what the minimum needed to lower the pH to 3.5. So just a little bit of background, the squid byproduct, the squid are commercially harvested using nets directly above spawning grounds during mating season and just the background on that as well is that squid will die shortly after reproduction. And so as far as an environmental concern or biodiversity concern, there isn't a concern and it is restricted to this use or to this fishing. Also, these fisheries have management councils and the management includes
seasonal catch limits, timed fishery closures, administration of permit insurance, and limitations on using lights to attract squid to ensure uninterrupted spawning. So they do have the regulations on there to protect those species.

It's not under the liquid -- or the fish because it is a mollusk, not a fish, although in the international acceptances, it seems that in multiple areas they did combine it with fish and so squid is not specific. The use of this is for a fertilizer and it can usually range for a 2-2-2 to a 3-3-3 or so, so we're not talking about very high levels and as far as the commenters, we had over 85 percent were for the use as the annotation.

Thank you.

MR. GREENWOOD: Thank you, Logan. Any questions for Logan on squid byproducts? I don't know how you ended up with so many things, Logan.

MS. PETREY: I don't know. I'm just kidding.

MR. GREENWOOD: You're almost done. Okay. Next we have lead salts and that's Javier.
This is your first time through.

MR. ZAMORA: Yes, good. Buenos dias a todos. Lead salts on the national list under 205.602(d) known synthetic substances prohibited for inorganic crop production. There's been several public comments not only for the public but organic certifiers and national organizations which most of them, if not all, are in favor of keeping lead salts on the national list as prohibited substances. It is worth mentioning that the leads inhibited seed germination, root elongation, seedling developing, lung growth, and it's toxic to plants and can remain in the soil for up to 2,000 years. That is all I have and thank you for making it so easy for me, so it was very nice with this.

MR. GREENWOOD: So I told you it wouldn't be too bad, Javier, so thanks very much.

MR. ZAMORA: Love you.

MR. GREENWOOD: Yes. So obviously, we want that on the list as a prohibited substance and we have some other things like that. And I
think it's good that it stays prohibited. Any comments for Javier? Okay. Thank you. So the last one is tobacco dust. And for some reason it's Logan again.

MS. PETREY: This one's super easy. It's okay. Hey, Javier, you got the right 205.602 I've learned, grab those. So yes, tobacco dust 205.602, which is also nicotine sulfate. Just to note that this has been on the prohibited list since the inception of the organic regulations and it is there because it is a hazardous substance for OSHA and but it can be used or was used as a natural insecticide for pest control. It is made from -- as a byproduct from commercial processing of tobacco products or I guess you can mix tobacco and water, make it home-made. But it remained -- has been on the prohibited list and all comments are to keep it there.

MR. GREENWOOD: Thank you. Any questions or comments for Logan again on tobacco dust? We heard a lot about this a few years ago when we were looking at the suckering of tobacco
plants with alcohols and lot of disease in humans working in the tobacco industry. And so it is a very toxic product. So that actually, believe it or not, completes our sunsets. And I want to thank all of the committee members. I mean, we had a lot of work to do. Some great discussion in committee and I think we've come out with a pretty decent products. I want to thank everybody and also for the rest of the Board members for discussion. So I will turn it back to Nate.

MR. POWELL-PALM: Just outstanding work. Thank you, Rick. Thank you, crops subcommittee, that was great. So on our schedule we normally would break for lunch, but we have fairly minimal amount to cover before the end of the day. So I was hoping if it's all right with the Board to break for 15 minutes here. Come back, go through PDS, we'll then go through DTO, which we differed from yesterday and then we have an opportunity to hear if there are any more questions on CACS, which we're cutting it short. And then we'll run over the work agenda and then closing
remarks and a big old additional welcome to our
new members. So if it's all right just to break
and then we'll come back, get through this three
items, and wrap her up. So if we could have the
slide and I'll try to do this math. But I think
we're going to go to eight after or ten. Thank
you. See you all in just a bit.

(Whereupon, the above-entitled matter
went off the record at 1:54 p.m. and resumed at
2:09 p.m.)

AUTOMATED VOICE: Recording in
progress.

MR. POWELL-PALM: All right. Thank
you, everyone, for hustling through that break.
Hope we got a little reprieve. Next, we're going
to to dive into policy development subcommittee,
PDS. And I will hand it over to Mindee.

MS. JEFFERY: Thank you, Nate. I'm
just going to stall for one second here, so
everybody can --

MR. POWELL-PALM: Yes. Not a worry.

MS. JEFFERY: -- come through. In the
meantime, as the policy development subcommittee chair, just wanted to let the stakeholders know that we really heard you on the persistent questions for meeting timing. And I wouldn't say we have an answer or a home for those questions yet. But that we do have some inspiration going on. And I am imagining several one-on-one full court basketball match ups amongst the subcommittee chairs to see who's going to win the contest of where this conversation will live. But so, you know, folks, we're listening out here. Thank you very much for all your persisting comments on the subject of meeting timing. So are we all here? Is everybody ready? I think we're close. I'm still kind of looking for a couple more.

MR. POWELL-PALM: Yes, maybe one more minute as folks trickle back in.

MR. TURNER: And we need a proper basketball game, Mindee. There's no question in my mind.

MR. POWELL-PALM: I feel like
Sacramento we actually you have to show up with --

MS. JEFFERY: Man.

MR. POWELL-PALM: Jerry's ready to go.

MS. PETREY: That's what I said too.

I was going to say that to Mindee.

MS. JEFFERY: I don't think there's going to be any surprise when Wood takes me down in that one-on-one battle.

MS. PETREY: It's so funny when we're all in the Zoom rooms, though. There's like no -- like I have no idea how tall anybody --

MR. POWELL-PALM: Everyone's the same height.

MS. JEFFERY: Okay. How are you feeling, Jerry? Are you ready?

MR. D'AMORE: Yes, ma'am.

MS. JEFFERY: Okay. Hold on. Let's just give it one more look because I think there's two more. I was waiting three more. Sorry. I might have jumped the gun on you, Jerry.

MR. POWELL-PALM: If you're there,
Liz, Javier, or Logan and you want to just flash your cameras on real quick to let us know you're there or just give a shout out.

MR. D'AMORE: Well, we've got the time to give the time, I think, don't we?

MR. POWELL-PALM: I think we do.

We're doing pretty good.

MR. D'AMORE: Yes.

MR. TURNER: I think in his defense he's doing proper farming. He's checking on his crew and making sure everything is going smoothly.

So let's give him a minute.

MR. D'AMORE: So how is it that we settled on basketball? I mean, as a wrestler that was just kind of tough for me to take, but I say.

MS. JEFFERY: Well, do you really want to hear the truth of my metaphor, Jerry? The founding -- one of the founding principles of the game of basketball was the spiritual enrichment of the community and I view organic much like I view basketball. So there you have it.

MR. D'AMORE: Well, can't argue with
any piece of that.

MR. TURNER: And as a lifelong basketball player, I'd hop on that train with Mindee because I think it's an apt metaphor.

MR. POWELL-PALM: Well, let's get started here. Liz said she has -- is, just about to hop on.

MR. D'AMORE: Do I have your permission, Chair?

MS. JEFFERY: Yes, sir. Thank you very much.

MR. D'AMORE: Not at all. Thank you. And so policy development subcommittee proposal. And it is a policy and procedures manual, PPM revision. The proposal before you had its origins in a spring 2021 discussion document and was introduced at that time under the heading, Amendments to the PPM to provide clarity and to address protocols for oral and written presentations. The policy development subcommittee has reviewed the suggested changes and brings us out of subcommittee as a proposal
for full Board discussion and vote. There were five total stakeholder comments addressing this spring 2020 proposal with four approving of the work and one firmly against the proposal. The opposing commenter had concerns regarding certain terms not being well enough defined and the use of the word impugn as not appropriate. This is to be seen in -- well, it's not -- I thought it was a comment, but any way, it's done in red on the document. One of the supporters of the proposal was also not happy with the word impugn and offered malign as an alternative. Generally speaking, the commentators recognized the revisions to the PPM as minor clerical changes to provide clarity and as a process to encourage a respectful comment environment. As one of the commenters is -- who was opposed to the proposal made reference to FACA requirements, I'm going to give our chair, Mindee Jeffery, the floor to take any questions or give her own comments to FACA as she sees fit. And that's it.

MS. JEFFERY: Great. Thank you,
Jerry, I did appreciate. I think the public comments. And so I went back and took a look at FACA and looked through section 10 for meeting conduct. And therein listed under A1, we are in compliance with the notion that the meeting is open to the public. And looking at A3, it lists, interested persons shall be permitted to attend, appear before, or file statements with any advisory committee subject to such reasonable rules or regulations as the administrator may prescribe.

So the allowing of written and oral comments, submissions clears our responsibilities under FACA. And as the PPM functions to assess the NOSB in the implementations of its duties under author, these are the PPM are our reasonable rules and regulations for expectations around the public's interaction with. Extension is repetition of what's already in written comments. And this addition update produces alignment. I think it's pretty clear that we're just codifying a level of respect and that we definitely want to hear all the facts and all the data from every stakeholder.
And we want to hear all the reputations as facts and data. So we're just keeping it classy really here with this update.

MR. D'AMORE: Playing nice.

MS. JEFFERY: Does anyone have questions?

MR. GREENWOOD: Kyla, is that a raised hand?

MS. SMITH: Jenny, do you want to go first?

DR. TUCKER: I would like to suggest that that becoming new a subtitle to the PPM, keep it classy. Very, very nice.

MS. SMITH: I just had a question about some comments that made the distinction between the word impugn and malign, and what your all thoughts were on that.

MS. JEFFERY: Sure. Thank you. I think we all like this suggestion, and since we're reflecting consistency in the PPM, we felt like we can put that in our back pocket and when or if the PPM gets updated again, we liked the word.
But because we're reflecting consistency, we're sticking with the word as is. I don't see any other hands sometimes when we're in this side gallery mode, I don't always see you, but it sounds like no other comments. We can move to a vote.

MR. POWELL-PALM: Yes, we can. So we have a vote for motion by Mindee and seconded by Jerry. We're going to begin voting. I believe with Mindee? Is that right Kyla?

MS. SMITH: That's what I have. Yes.

MR. POWELL-PALM: All right. So Mindee, your vote please.

MS. JEFFERY: Yes.

MR. POWELL-PALM: Okay. Yes. For Mindee. Allison?

MS. JOHNSON: Yes

MR. POWELL-PALM: Dilip?

DR. NANDWANI: Yes.

MR. POWELL-PALM: Logan?

MS. PETREY: Yes.

MR. POWELL-PALM: Kyla?

MS. SMITH: Yes.
MR. POWELL-PALM: Wood?

MR. TURNER: Yes.

MR. POWELL-PALM: Javier?

MR. ZAMORA: Yes.

MR. POWELL-PALM: Amy?

MS. BRUNCH: Yes.

MR. POWELL-PALM: Brian?

MR. CALDWELL: Yes.

MR. POWELL-PALM: Jerry?

MR. D'AMORE: Yes.

MR. POWELL-PALM: Carolyn?

DR. DIMITRI: Yes.

MR. POWELL-PALM: Rick?

MR. GREENWOOD: Yes.

MR. POWELL-PALM: Liz?

MS. GRAZNAK: Yes.

MR. POWELL-PALM: Kim?

MS. HUSEMAN: Yes.

MR. POWELL-PALM: And the Chair votes, yes.

MS. SMITH: That makes it 15 yes, 0 no, 0 abstain, recuse, or absent. The motion passes.
MR. POWELL-PALM: All right. Again, a big shout out to Mindee for the work and Jerry for the work on this. It's a small but mighty committee that PDS. There's only three of us on it.

MS. JEFFERY: I'm given that to Jerry. Good job, Jerry.

MR. D'AMORE: Thank you.

MR. POWELL-PALM: All right. So we're cruising along. Deferred votes. Yesterday we did not have time to get to DTO. That will be discussed and lead -- the discussion led by Wood. So if Wood you would be up for going over GTO now.

MR. TURNER: Sure.

MR. POWELL-PALM: And draw back into materials.

MR. TURNER: Sure. So I guess this is second day extension of the materials section of the agenda. So a reminder to everyone that we have a discussion document on distilled tall oil that I think you've all had a chance to review. We have
a petitioner who has -- is interested in seeing
distilled tall oil be listed as 205.601(m) and
205.603(e) as a synthetic substance permitted in
organic agriculture and used in particular as an
inert ingredient and as an adjuvant for use to
solvent, sticker, anti-leaching agent, and time
release agent in pesticides. So we've had -- I
think is we heard in verbal comments. I think I
heard someone reference 22 months. This is a
petition that's gone through several rounds of
documentation requests and input from the
petitioner. We've had a TR on this as well and
just to give you a little bit of history. It was
a previous petition on this in '08 that ultimately
ended up being rejected, but it was not DTO, it
was tall oil specifically. And there was a
concern, I think in the petition that -- in the
TR that there had been a lack of clarity between
a material referred to as crude tall oil and
distilled crude oil. They're too -- we did want
to make sure in the TR this time that they were
distinctly represented and distinctly address
because they may have differences. And so that's an important issue that I want to make sure people understand that this petition, even though there's some history on tall oil being reviewed in previous iterations of this Board. You know, we're trying to understand more specifically this petition in the context of the distilled tall oil.

But I think more importantly, and you heard in my introduction, the issue here is that we have a material that is being petitioned. That is intended to be used as an inert or adjutant, not as an active ingredient. And the use is to augment the functionality and sequestration of approved substances in organic production. As we've all noted in a variety of different contexts, however, we have no process currently today for how to actually evaluate inert ingredients. And I will say that in our subcommittee, we've had a number of different discussions on this topic over time. Looking at the material on the merits, at raising a number of different questions as a group about the fact that this material, again, I don't
want to conflate a lot of issues here, but I think there's a lot of complexity here. One is whether or not -- one is the fact that this is a petition for an inert ingredient. And two, is whether or not the material, as we understand it, isn't -- functions as an inert ingredient or an active ingredient. So I think that's been really an interesting part of our process, concern about whether the rates that are -- that have been indicated as being kind of the rates of application for this material really do allow it to function as an inert ingredient versus an active ingredient.

So I just -- that's been a really interesting part of this process.

I do want to point out in the discussion document, however, that there is an unfortunate typo. And it's on the -- in the third paragraph that the section called the inert versus active.

The document says the petitioner has submitted additional information -- I'm sorry. The petitioner has since responded to the use of the substance as an inert is intended to produce the
effects of an insecticide. I want to be clear. That's not what the petitioner said. The petitioner sensory responded that the use of the substance as an inert is not intended to produce the effects of an active insecticide. So this has been the petitioner's perspective on this particular issue that is not an insecticide. However, I will say that those issues have come up in the context of our conversation as a subcommittee on this material. And I think we're still, you know, really still kind of -- still working through those kinds of questions.

I want to point out as well that you know, I don't want to -- I think we've learned a lot about this material and I think we've come to this issue with a very open mind. Despite the fact that we don't have a process for evaluating inert ingredients. I think we've learned a lot about material. We've certainly recognize that there's a potential for this material to provide some benefits including sequestration of pesticides and
micronutrients from leaching out of the soil. I think that's -- well, leaching into groundwater in the case of pesticides or leaching out of the soil in the case of micronutrients. So I just -- I do want to point that out and I do also want to point out that there are other context where this material certainly in the context of food packaging, has been identified by FDA as the one of these generally regarded the safe materials, so I -- that would you have an open mind on material. However, we do not have a path forward on this and so I did want to -- I didn't want indicate that there is -- there was a lot of interest from the community on this. I think some commenters acknowledge the complexities that are raised by this petition and unfortunately, the timing of this petition, given the fact that we're trying to figure out this -- get some guidance on how to actually handle inert ingredients, it's complicated. You know, certainly there's been some commenters who have suggested that we should just reject the petition outright, as it is. Let
me say -- let me see here as well. And then quite a bit of responses from I think the community that the petitioner and the petitioner community of producers of these types of materials that want to see these kind of materials move forward because of the functional benefits of material -- the potential functional benefits of materials like DTO.

So, you know, it's been an interesting process to sort of hear from the community and try to make sense of sort of, you know, what the right pathway is. But I just wanted to continue to go back to this point that until we have a path forward on this, until we have a clear pathway on how that -- how to evaluate inert materials that we recognize or discussing ad nauseum, about how, you know, may have -- may be listed on obsolete lists managed by other agencies and so on and so forth.

We're kind of in a little bit of limbo period here. And unfortunately, it creates a situation where we have a petitioner who is eager to see some decision made on this material and we have no path
forward. We have no reasonable path forward, we have no imperative on this, on how to manage this process. So that's -- I'll pause for a minute because again, we -- I want to indicate this is a discussion document. We would welcome continued responses to questions to our stakeholders in this material over the next couple of months. But I do want to flag this very important question that, you know, I'm not sure what the responses to those questions will mean, you know, if we don't have a path forward on this. So again, no vote. I'm trying to outline this as clearly as I can. I hope this is helpful to those who don't -- who haven't been as involved in these discussions in the subcommittee, but I'll pause for a minute, Nate, and see if there's any questions we can discuss here.

MR. POWELL-PALM: Mindee, please go ahead.

MS. JEFFERY: Thank you. Honestly, I wanted to just take a minute and really appreciate the petitioner because I know that we've gone back
to them and gotten more information from them. And they've been really in a great dialog in that process. And I really appreciate the number of written comments on this subject and the level of expertise people were sending to us. Appreciate knowing that oral comments [inaudible]. The best piece of advice I got from [inaudible] started looking at the California Organic Products Advisory Committee was to remember that regulations take time because it's good for society. And then I just wanted to appreciate Jenny's talking about the advanced notice of rule-making on this subject and look forward to seeing where that goes and how that dovetails into our process and seeing when, if, and how evaluation of inerts comes back across aisle as it were.

MR. POWELL-PALM: If I might in with a quick question for Jenny. I think if I've got my timeline right. Oh, sorry. Yes. You have your headset. In -- I think it was 2014, NOP asked NOSB for a process for reviewing ancillary substances and a review or recommendation came out
in 2016 and the NOP said they were reviewing it. I was just wondering if there's any update on that review process from 2016 recommendation on ancillary substances?

DR. TUCKER: Yes, that one I was listening the whole time. You just -- you can hear me better when I'm talking on my headset than when I'm yelling at my computer. So that's why I plugged it in.

MR. POWELL-PALM: Sure.

DR. TUCKER: So that is one we have not moved forward with ancillary substances since that work stopped, so I don't have any update on that. I believe and I'm frantically hoping somebody is going to chat me in the answer for my team here. I believe ACA has done some kind of best practice -- has done a best practices document on ancillary substances or was working on one. You know, this is where I'm going to get myself in trouble if I talked too much because the reality is, I really don't know this has not been one that I have been very heavily involved in. So does somebody on my
team who knows clearly more than I do, like to jump in here, this is the phone a friend part of the conversation.

MR. POWELL-PALM: Absolutely. No pressure because we were just putting you on the spot.

MS. SMITH: I'm also trying to phone a friend on the ACA best practices part. So if I get a response I'll let you know.

DR. TUCKER: Okay. I'm sorry. I don't have a good answer at this time. I do know that this is not one that has been on our active work agenda since the Board did its work. This is a bit before my time in my current role and I was not all that involved in this at that time.

MR. POWELL-PALM: I think to -- yes, to Woods point, sorry Amy, I don't mean to cut you off. To Wood's point of having a procedure and process available to us. It maybe great to follow up on this with you after the meeting. Please go ahead, Amy.

MS. BRUNCH: Thank you, Nate. And I
echo, you know, the need to have a procedural process. I was just going to make a comment, you know, and in the oral comments, there was something that was mentioned about the quantity applied of this and it points to, you know, inert and not maybe having any insecticidal properties, but, you know, there's -- in farming, you know, just minimal amounts can really equal a big punch. I point to things such as gibberellic acid. It's a plant growth regulator, it's approved to be used with restrictions in organic, those are applied in -- it's in a formulation but the actual composition is tenth of a gram applied on an acre. So 1.32 acres equals a football field. So when we look at, you know, small amounts creating a big punch, it is worth looking into the details and not just, you know, putting them up to chance that low amount, you know, it doesn't have any properties that can contribute to, you know, in this case an insecticide or something. So just a comment to mention.

MR. TURNER: I really appreciate that,
Amy, that was meaningful to hear you say that. I think that we did have discussion as a subcommittee on that particular issue, and I think that will definitely bubble up to something that I think sort of added, again, not to conflate issues here, but it added a layer of complexity to our concern about this because in fact it's being suggested that it's in an inert or adjuvant but in fact it's, you know, there is some obvious debate on that which I appreciate your comment, so I appreciate you saying.

MS. BRUNCH: No problem. Thanks.

MR. POWELL-PALM: Carolyn, please go ahead.

DR. DIMITRI: So this seems very -- this whole product seems very weird to me. So -- oh, my computer's jumping in the conversation. So can -- and maybe this has already been done, but could someone just give me like a three sentence, non-technical justification for like, why this would be helpful to farmers?

MR. TURNER: I would love to defer to
any grower in the subcommittee or who has thoughts in this, but my understanding of the material is that it actually helps bind other active materials. It allows them to be -- god, I'm so -- I'm already desperate for somebody to jump in.

MS. PETREY: Okay. I think they said something earlier saying something like it was sticky. You know, that --

MR. TURNER: Sticky, that's it.

MS. PETREY: You know, cohesive type of -- not chelating, but something to that effect --

MR. TURNER: It pulls it together.

MS. PETREY: -- so whether it's sticking to the plant so that it's staying on there. And so like a lot of times when we apply products, there's a rain fast period or a -- you know, where you're trying to make sure that you're not applying right before a rain because it's going to wash off and you wasted a lot of your application. Or you don't want to irrigate -- overhead irrigation immediately after. Or if there's like, you know,
a lot of fog setting in. So there's some environmental conditions that can limit you on application timing. And I think that that's what this is. Wood, does that sound right? The resins stuck to me like the pine sap stickiness, so --

MR. TURNER: Thanks for jumping in, Logan. I was so worried about sounding stupid that I didn't want to say sticky but --

DR. DIMITRI: You feel like you said something stupid --

MR. TURNER: You should be doing that.

MR. POWELL-PALM: I think we need to throw the word sticky into the official definitions. It's very, very useful. If we could, please hear from Javier next.

MR. ZAMORA: Yes. I think with farmers we referred to some like this as a sticker for whatever product we're applying to our crops just before the rains or kind of like to hoping that it stays there longer until the ingredient that we're applying, does its thing, if you will.

But also any sort of sticker and maybe in this
kind of -- this type of, pine resins and stuff will be leaching out, will be washed off the plant and end up in the soil. So my concerns and my questions are how long will it stay there? Or will just disappear or will it be washed? What would be the effect on our soil or other plants around after the usage of this sticker because we referred, to these materials as stickers ourselves.

MR. POWELL-PALM: Great. Yes, thank you for that. Kyla, please go ahead.

MS. SMITH: Yes. I just wanted to, you know, Nate, you would ask Jenny about the ancillary substances recommendation. And so I just wanted to say that while related, I believe these are separate topics, right? So we don't have a, currently, we don't have a review process for inerts nor ancillary substances.

MR. POWELL-PALM: And you said, if I have a right would be more processing and multi crops and livestock.

MR. TURNER: Like propylene glycol.

MS. SMITH: Correct. Yes. So, yes.
So, anyway, hopefully the ANPR will help to address the inerts situation. And then we need to maybe circle back around or see what to do, what the next step is with the ancillary substances recommendation. So again, while related, also separate.

MR. POWELL-PALM: Yes.

MS. JEFFERY: Because the inerts one was the -- when the former Board tried to see if the safer choice that EPA would work, and it really wouldn't. I think that was the other side. The previous Board work on inerts was when they tried to marry us into the Safer Choice program, and it didn't work out. I think that's how the history went on the inert side.

MR. POWELL-PALM: Do you have something, Logan?

MS. PETREY: No, I apologize. Thank you.

MR. POWELL-PALM: Okay, good. Thank you. All right. Mindee, please go ahead.

MS. JEFFERY: Yes, thanks. I just
wanted to jump right in again and to say good job, Wood. Thank you so much for taking on some really dense subjects. Appreciate you.

MR. TURNER: It's the gig, right? And it's what we do.

MS. BRUNCH: Yes. See, I got all the really simple ones, really. You're doing the heavy lifting here.

MR. TURNER: It will of a sudden hit you, I promise you.

MR. POWELL-PALM: Kyla, please go ahead.

MS. SMITH: Yes. So just wanted to just chime in a little bit more about the CACS work on ancillary substances and that this was as far as I understand it talked about it. And did some training on it that there were more than one way to go through this process. However, it didn't get incorporated into the CACS best practice document on material review stuff because there wasn't one agreed upon way, there wasn't sort of consensus amongst the groups. So anyway, that's
my understanding.

MR. POWELL-PALM: Wood, please go ahead.

MR. TURNER: And Nate, I just want to say before we wrap up discussion on this, that I think we're flagging some issues here for discussion document level and I -- we can certainly discuss it, I welcome any thoughts that you or the program has on this, but I don't know what our pathway is to bringing this to a proposal in its current form. So I just want to say that, I don't know how we'd bring proposal for the fall. And unless someone wants to weigh in here and tell me that I'm wrong about that. That's where I'm leaving. That's where I'm ending this. That's where I'm jumping off here.

MR. POWELL-PALM: Yes, I think this entire discussion's highlighted some some deficits in our ability to proceed with process. And so I think that's a valid point. And I'm excited to get with the program and see what our options are and how he can keep addressing this. Because it's
-- yes, it sort of permeated all subcommittees, crops, livestock, and handling. All right. How's everyone feeling? That was intense. I appreciate all of you getting through that right after a quick break. So and not having lunch yet. Amy, did you want to pick up and offer a chance to hear any other Q&A about the CACS discussion document and we ended with on Tuesday?

MS. BRUNCH: Yes. Thank you, Nate, for this extra time. I just think that's worthwhile since we're convened here as a group to make sure that all voices are heard on. Any of our CACS topics, but especially the one that we ended the day on Tuesday. So I asked for this extension to be able to convene for this purpose. And on the oversight to deter fraud, we did have some good questions and discussion on the acres on certificate, which actually is intended on being just a quantitative quick way to match production area with products produced. So we did have some discussion on that. I'd like to make sure that we heard everybody's voices on that. And then just
see if there was any questions or comments on part two of that discussion document, which is the universal bill lading, which really is a conversation about identifying standards or record keeping minimums as some of the written comments suggested. Just so we can have a clear picture on farmer reconciliation with their lot tracking numbers to their bill sales to end users and also from a certifier inspector point of view for these crops checks. So with that, I will turn it back over to the team this for quick Q&A. Yes, Nate?

MR. POWELL-PALM: All right. So, Amy, may I asked you a question as a producer.

MS. BRUNCH: Oh, sure.

MR. POWELL-PALM: So you sell grain primarily, as your organic crops, and you sell a lot of different loads. When you get -- well, could you describe to us real quick what is a bill of lading and why is it relevant here?

MS. BRUNCH: Yes, the bill of lading is essentially our ability to do lot tracking on our farms so our bill of lading and OST had asked
for are unique way to accomplish this. With every load that we deliver from our farm, it has the date in which the -- or the crop year in which our crop was produced, which farm it came from, if it was in storage, what inside it was located in, and you have my certifier information on the sheets, as well as contact information and the type of crop.

So that I guess, as a whole or are some significant pieces to the bill of lading. It also has my trailer trap seals and I am growing food for the consumer. So all of that process is my lot tracking. So ideally if there was a question on any of the loads that I delivered, I could go back into my system and understand where things came from. So, you know, we heard from --

MR. POWELL-PALM: Follow-up.

MS. BRUNCH: I'm sorry.

MR. POWELL-PALM: And I might ask you a quick follow-up to that. So when you have your lot number, it captures a lot of information about the products that you're sending out the door to your buyers. When you get receipts or settlement
statements from your buyers, does that lot number usually track through?

MS. BRUNCH: Yes, that's a good question. And I thought I was on my own little island with my buyers. No, it doesn't. And then hearing with a broader audience just with my own producer network and other written and oral comments. We're all kind of in the same boat. It's very difficult then to match up our lot numbers for the loads me delivered with the settlement sheet, which is what the buyer gives to us to just recognize the loads that we brought in and the only way really to do it as match it up with dates, but it is tough when we're taking our products across state lines, the dates don't always match up, so it's a little bit of a guessing game.

MR. POWELL-PALM: So seems like there could be a little bit of pressure applied from the inspection process as well as certifiers that the buyers, handlers, brokers who purchase primarily commodities, but all organic crops should be expecting these lot numbers to carry through more
consistently. Kyla, perfect timing. What do you
have to say about this as a certifier?

MS. SMITH: So again, maybe this was
like more the intent of the discussion document
than the actual like wording being so like
hyper-focused on the document of the bill of
lading. But I'm just thinking about, you know,
maybe not all sectors use a bill of lading. And
so I think maybe what is intended, it's just sort
of what you were talking about, Nate, is like that
through line of certain elements on all audit trail
documentation. And so I know as the proposed rule,
there was some proposed language to have further
detail in the record keeping section that to
identify products as 100 percent organic, organic,
or made with organic and things along those lines.
Like on all audit trail documentation. And so
I guess I'm just like wondering if perhaps we don't
make it so specific.

MR. POWELL-PALM: Super helpful.
Logan, please go ahead.

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MS. PETREY: Thank you. Thank you, Amy, for all this work. Okay. So with bills of lading -- so we do -- I want to talk about produce and/or grain. It's a very different type industries of the way product is handled. So in veg, you know, we're typically -- you're dealing with packages. So we're talking about small packages and not bolt product like grain, I mean, with grain, you may be putting at least in my circumstance, we may be putting multiple fields, even different varieties and storing it in a single bin. And I wouldn't be able to separate that. So a lot to me on the produce side means a specific planting in the field by variety, by a certain crop. And because of food safety reasonings, we are able to track that lot number specifically to like a GPS coordinate, you know, a mapped area of that and that goes through our system. Now, I understand our farm is you know, digitalized with accountants and things like that and software. So I understand this. And not every farm is this way, but we are able to track that through, or
whether, you know, it gets received with receiving reports. And then we also, you know, when it loads up on a truck, we have the purchase orders and I mean, when you go through the audit tracing, it's just there's so many pages, but you may not have that lot number identified on every single piece, but it's like a map and so you just kind of connect the dots from this number with that number and this number, you know, equals this and that, you know, it just kind of opens it up to a bunch. So it's almost kind of fun doing the audit trace back because you click on one number and that's a bunch of possibilities and you find your other possibility and go down. With the grain on our purchase settlements, we don't -- I don't -- I'm looking at one, don't have the lot number. What I do have is the bill of lading ID number. So like our client or customer gave us a specific PO for that or bill of lading number, and then on that bill of lading sheet, if I were to reference back and look back at the sheets, I have the lot number on that. I don't know if that helps anything, but
sometimes it's not -- like the lot number that I assign at the farm may not be there, but it's a trail to find back. Don't know if we, you know, can universally put a field lot number on everything, but that's how we track it on here with our different types of produce and grain.

MR. POWELL-PALM: Super helpful. If I may jump in here real quick, Amy.

MS. BRUNCH: Yes.

MR. POWELL-PALM: I think as an -- as organic inspectors, we are trained to, as you're saying, follow that road map, figure out how the connectors exist. What Amy, I think, is citing is when basically there isn't a real connector between a receipt and a bill of lading. And be it a lot number or a purchase order number or another connector, it seems like between farm and aggregated processor, there is this growing black box of information.

MS. PETREY: I don't think it should be. I think that that needs to be handled, so yes, absolutely.
MR. POWELL-PALM: But I appreciate that, we want to make this work for everybody. So that was a really helpful example.

MS. PETREY: Yes.

MR. POWELL-PALM: Kim, please go ahead.

MS. HUSEMAN: Yes. I'll just give it from a buyer's perspective as well. So and maybe I'm going down this in a little bit different of an angle, but we use BOLs. First off, anything that comes into our facility has to have matching internal purchase order number on that BOL, if not, it's rejected before it ever entered our site. And that's for organic integrity and a bunch of other reasons because we don't want a low that was supposed to go to our neighbors to end up at our facility, right? So we have internal numbers that we communicate with our buyers to link those up. If we're looking from a mass balance standpoint, you know, to me, I would think that weights, and I'm not buyer of vegetables so I can't speak to what Logan just talked about. But I do appreciate
that aspect. But if we're trying to do a mass balance, I think weights are very critical to this phase. And I don't know who's responsible for entering that, and how does that get connected? Because from an audit standpoint, I know what we go through from a buyer. The disconnect to me is the link between the certifier of the buyer and certifier of the seller of product. And it's a very difficult topic, I guess, is what I'm getting at. And I'm not sure I'm clear on the angle in which we're trying to go to create that conduit.

MR. POWELL-PALM: If I may, Amy, I think, you know, the spark for this discussion document is acknowledging that break between the certifier with the buyer and certifier with the seller. In trying to figure out through best practices, how do we have more consistency on that bidirectional information discovery? And so when we're an inspector for either party, it should be the similar, if not the same information we're seeing on both ends. Is that correct, Amy? Anything to add to that?
MS. BRUNCH: Yes. That's correct.

The bidirectional look back is what we're going through and having those common elements go through the chain. And one thing, Kim, that was great perspective from your point of view as a buyer.

From the farm level, a lot of these products are leaving without being scaled up. So without --

MS. HUSEMAN: That was -- yes.

MS. BRUNCH: Yes. So I mean, that's a good point. It's just really to make sure you know, things aren't being double counted and through different places in the supply chain, you know, there's different certifiers involved, so it's just looking -- trying to get similar data so the whole process from start to finish really examined.

MS. HUSEMAN: Because our expectation is that farmers do not have certified scales on their properties. So we are using destination weights that are agreed upon between the buyer and the seller. But from a certified weight standpoint, it's really difficult to get two
matching numbers or correlating numbers if you're coming directly off farm and it's not collected at a transit facility or if it's railed versed truck, or how products move in such a fragmented space, speaking directly from the grains aspect. The correlation I'm sure, you know, Javier, Logan, you guys have much better detail in information on that from the vegetable side so --

MR. POWELL-PALM: Brain, please go ahead. Thank you for that, Kim. This is really, really helpful.

MR. CALDWELL: Well, thinking about making this work for everybody. I think I'm going to ask questions relating to the many thousands of small mini and micro small scale producers who have nothing to do with bills of lading. And when I deliver almost all my produce by my, you know, I do it myself or an employee does it. And we have of course, you know, invoices and receipts. We have records that we keep. About what how many CSAA shares go out to different locations all that kind of stuff. When we used to do farmers market,
we would keep records of our, you know, what produce we brought, what produce we either gave away at the end to donated or brought back. But it's a completely different world. And I hope that we can make whatever process we're putting in place here, you know, not be an extra burden to all the small-scale producers of which there actually are many more than there are large-scale producers in the organic world. So just want to put that out there.

MR. POWELL-PALM: Yes, I think Amy really saw this question because in the discussion document, it only describes bill -- business to business transactions. So if you're selling directly to consumers to end buyers, this doesn't apply to you.

MS. BRUNCH: Yes, absolutely. And one other thing to add, you know, a derivative of this discussion document was just determining consistency of what the definition of sufficient means just to kind of get everybody in the whole community, you know, more or less, using their
unique system, but capturing some of these key
minimum reporting requirements, doing it, you
know, the question was, should it be granular,
should be aggregated, you know, just to try to
invoke a little bit more clarity there as well.
Okay. I'll turn over you, Nate.

MR. POWELL-PALM: Thank you for that.
Javier, please go ahead.

MR. ZAMORA: All right. I think
there's two -- I see two different issues here.
Or at least, but trying to -- we're trying to
figure out two different things. So if you are
trying to figure out the mass of the amount of
product that is being grown from a farm. That's
kind of, it's relatively easy because there's
numbers and there's data that we can go by. If
you're a grain grower, certifiers know how many
tons, if you're strawberry grower, you kind of know
how many trays of strawberries you grow. That's
one thing. I think it's -- if you are a specialty
grower like myself and if you sell to let's say
I bring my strawberries to, you know, to a
distributor, we have a way to trace our
strawberries from the Triple M Ranch (phonetic)
or the Maja Ranch (phonetic) with a little sticker.

And then we have another number that it's our
grower's number that gets input into the lot number
that the distributor has. So if there was an issue
with our strawberries, there's the number to trace
exactly where it's coming from. So but if you sell
at a farmers market, there's a way to figure that
out too, because you have like Brian was saying
load list, you have harvest records, you have
designated blocked numbers, designated ranch
numbers. So we're looking at two different
things. We're looking at the mass amount of
product that is grown and we're also looking at
traceability. Now, how can we make everybody
happy? Or how can NOSB come up with an idea the
NOP can enforce? It's going to be hard because
we don't have a silver bullet for everybody, but
I think we need to differentiate, unfortunately. Yes, if you're a grain grower, it's just one thing. And if you are a specialty crops grower, it's a whole different thing because they can tell you on a block of 12 acres, I can name 30 different crops that I grow. Now, how am I going to be able to trace the rutabaga or the cauliflower, cilantro, tomatillo, cherry tomatoes, and corn and brussels sprouts and bell peppers and broccoli from that block? And not only that, you don't just harvest one-shot. There's several times that you harvest even broccoli, two or three times, cherry tomatoes, ten times. So it's very complicated. But if you -- if the goal is to understand whether somebody it's -- or there's some fraud going on, that everything is there for you to identify it. Now when you do that, are you interfering into something that might not be our business into their private -- privacy of their -- the farmer? Well, when a certifier shows up, there's absolutely no privacy. They're coming in to check and see how your operation is working. So I think the biggest
issue that I've seen in the past and people talked
about that is when grains come out of overseas or
some other countries and then the paperwork doesn't
really, you know -- we don't really have -- or the
tools are not there in place to really trace
everything to the block where things came out of.
But if you do have a way or actually identify and
whether you know the 400 acres in Colima, Mexico
are actually producing 300 tons per acre or lines
or whatever it is. So figuring out, it's tricky.
But the certifier can go in and really figure out
whether what you're saying, it is what is happening
at your farm.

MR. POWELL-PALM: Let's hear from one
of those certifiers. Go ahead, Kyla.

MS. SMITH: Yes. I'll just sort of
echo some of the things that Brian and Javier said,
is that whatever we come up with here, I think it's
really important that it is applicable to all
sectors. All types of operations, big, small,
in-between. Tech, no tech. It aligns with
current regulations and pending regulations. And so that's I think where my struggle with this is, is that we know that SOE is coming, and it can't come fast enough. And I know that the intent of this proposal is not to upset that apple cart or -- and it's to support, but it's just hard to know how it's supporting. Do we need to do more, without knowing exactly what it's going to say.

And then the other thing, specifically with bills of lading, it's, you know, it's a transportation document. So I know that there's like other types of audit trail which documents which can be used depending on your type of operation, which is sort of, you know, what my comment was before. But oftentimes, transportation companies themselves are not certified. So the oversight of those -- of that activity happens on the buyer or the seller's side. And so hence, a little bit of that black box fits in there. Because certifiers, don't have that direct oversight in the way that we do over companies that we certify. So we have to rely on either the buyer or seller operations
that we do certify to then create that link. And then also again with SOE there -- again, there are in there going to be increased record keeping requirements. There's also going to be increased cross-checking required to be able to do supply chain audits. So this was going to what you were talking about, Kim, and helping sort of, again, not through line to be able to connect the audit trail across the supply chain. So again, I just say all of this because it's coming and I know that like we want to do more and we want to do things now. And so I just, you know, don't want us to get too far down the path without knowing exactly what is already going to be included.


DR. DIMITRI: This is very important and it's a very complicated topic, obviously. I just thinking about the producers that are kind of on the edge, should I get certified, should I give up my certification and I think that keeping them in the organic, you know, as certified organic
is really important and I just wonder, as we think about this, can we think about them and not actually pushing more smaller scale producers out of organic into, you know, that fuzzy world of I use organic practices, but I'm not certified.

MR. POWELL-PALM: Appreciate that.

Liz, please go ahead.

MS. GRAZNAK: So this actually relays specifically goes to Carolyn's comment, which is I fall within that, you know real small farm category. And the conversations that I have with many growers that I'm in touch with who are on that fence of should I certify, I grow using organic practices, but I don't want to certify. One of the things that I tell every single person that I hear that argument from is that in the course of my farming career, when I started keeping track in year four of very specific details, lot code information on seedings, transplantings, seedings outside in the field, harvest records, applying lot codes to everything. That's when I became a really good farmer. And those records that I
started keeping made me much better and much more efficient. And even at my very small scale, I keep all of those same -- the same lock codes that Logan on her farm keeps. So I don't personally think that that is or should be used as an argument to keep somebody from certifying. That's my perspective.

MR. POWELL-PALM: I can't tell you how much I appreciate that as an inspector, I think I would say that the record keeping requirements are just good business management requirements. And I think that all around you noticed that the really well run businesses don't have a hard time with records. It's just as both clearly track together. Javier, please go ahead.

MR. ZAMORA: Thank you. Liz, it's you know, I'm glad you there's more. It's probably how limited customers and CSA, but something that has been said and I went to echo this, the amount of smallest grower, the smaller growers, that are disappearing or not certified organic anymore, this is one of the biggest reasons because they
don't have the HR behind them that can keep track of every little detail. Again, it's not that difficult because it's just business. But there is a load of work that needs -- lots of work that needs to be done. I can tell you that I have two people to take care of that. Just my CCOS, my organic certification, and we still struggle because we are so diverse. I grow from 75 to 150 varieties of flowers. I grow 40 different crops. And that's -- why did I do that? Because that's the only way for me to compete with a larger grower.

If I have some flamingo strawberries and some mar de voir that are different than the massive amounts of strawberries that are grown. That's the only reason why I'm still in business. And that, I can tell you that my customers we've been dealing with them for, you know, the 25 customers for the last 7, 9 years. And if I went non-organic. I probably wouldn't lose them all, but I will lose some because I have to have the seal in order for me to sell to the school district. So there's a lot of limitations to how far your organic certification
can go to keep the new small family members farms available and being kept as an organic producer. I mean, this is the Santa Cruz area, the Watsonville. Now at the farmers market, you can count how many certified organic operations are there.

MS. GRAZNAK: Yes. Can I --

MR. ZAMORA: Ten years ago was not the case. You can count how many they weren't certified. So something is happening that we need to make sure that we were not going to find a silver bullet. But we have to really, really figure out a way. And again, I said it twice. There is ways to do it easily because my door is open when they come. My files are right there, my receipts are there, my sales are there on the whole enchilada. You just have to --

MS. GRAZNAK: Can I --

MR. POWELL-PALM: I just want to say one thing real quick. The primary thing we're looking at here is buyers, tracing back to farm. Farmers on the whole look like they're taking --
doing a pretty good job tracking that information.

   It's really this connector, Javier, rather than
putting on farmers, it's far as how do we get what
the farmers are already doing to track over to the
buyer? Amy, please go ahead.

   MS. BRUNCH: Actually, I'll defer to
Liz and then I'll get right in there at the end.

   Liz, if you want to make a comment.

   MS. GRAZNAK: I'm good. I'm good.
Thank you very much, Amy. And thank you, Nate,
for clarifying the specificness of this actual
discussion document. Yes,

   MR. POWELL-PALM: Absolutely. Yes.
To the -- to speaking to those very small producers
that primarily going direct to consumers.

   MS. GRAZNAK: Right. Yes. Yes.

   MR. POWELL-PALM: This would have
nothing to do with them.

   MS. GRAZNAK: Correct.

   MR. POWELL-PALM: It's really business
to business. Fraud exist more in the business to
business space. Where we have aggregation, where
we have longer supply chains. Direct consumer isn't where this is targeting. I will turn it back to you, Amy.

MS. BRUNCH: Okay. Well, I'm grateful for this extension and this conversation and just the diversity of opinions and thoughts on this. And it isn't an easy subject. And then I appreciate the respect and going over this to find, you know, an efficient option. I just point to the title of this discussion document is, Modernizing our system. You know, maybe there are things that we should be -- what data it is being captured and there was a lot of ideas on making things a lot more transparent. What was concerning to me is just hearing that a couple of certifiers said out out of all of their non-compliances, over 50 percent is because of bad records. To me, I think sometimes we stay, let's just let the farmer come up with whatever system they want. But I'd rather not see that system not be sufficient enough. So, you know, as a transition farmer, that's coming from a
conventional world, record keeping to this level is really ambiguous. So it's actually can be helpful to tell them, you know, some of the minimum ways to --

MR. POWELL-PALM: Oh, no. We lost you again there, Amy.

MS. BRUNCH: Sorry.

MR. POWELL-PALM: That's okay. I think I'm not hearing you. Yes.

MS. BRUNCH: Yes. So that I mean, that's then I appreciate the discussion. I'm finding the pain points and seeing if there's opportunities to optimize. In terms of these two subject matters, in particular, acres on certificates actually does not look like it's in a scope of SOE. So potentially we could look to decouple these two ideas and have potentially two formats going forward on these particular initiatives instead of combining them because they are two different subject matters. Just to help shore up some of the gaps that have been identified by other stakeholders. But with that, and I want
to deliver too much longer. I minute turned it over to Nate to wrap this up if there's nobody else to discuss anything.

MR. POWELL-PALM: I just wanted to thank you, Amy, for flagging this for us. As we see how many people had thoughts about this, I'm really glad we have the chance to circle back. So thanks for putting this back on our agenda. All right. So folks on the whole, that pretty much wraps things up. We're going to go over the work agenda now for our upcoming semester. And then we will end with a welcome to our new members. So if we could project the work agenda, and we'll just go through by subcommittee, and I apologize, would you mind making it just a bit bigger, a little bit more zoomed in. Great. Thank you. So continuing from -- oh, yes.

MS. SMITH: I just want to interrupt you just for one second so you know, the yellow highlighting are the ones we sent back from this meeting. So they're back on the agenda for the fall, I presume.
MR. POWELL-PALM: Perfect. Thank you. So for the fall our meeting in Sacramento, hopefully, our first in-person meeting in awhile, we're going to likely have a proposal for oversight improvements to deter fraud. That which we just discussed. A lot of that fall for that. Human capital management NOSB technical support will go to a vote. And then we'll also have a proposal on organic and climate-smart agriculture, which I am stoked for. So being able to dive in and take a vote on how we can better articulate how organics fits in this space. NOP risk mitigation tables, we will be working on again this semester that we sent back. And then moving into crops. So carbon dioxide send back, it will still be on our work agenda to vote on in the fall. We are going to have a pile of material votes. Spring always seems easier when I look at the small agenda. So I hope everyone enjoyed our warm-up session because it's going to be a marathon of voting on all these materials we went over will go to a vote. So I won't read them all off. You can see them as we
scroll through here. And we're going to be moving through crops and then we had in handling sent phosphoric acid back. So we'll be working on that this semester as well. If you want to slow scroll, please. We'll be voting on all the materials about what you heard this meeting. So really excited to have some questions that we post back to the community in your fall comments, and to hear from you on these things. Livestock will have those material votes. In the materials subcommittee, we're going to have our tall oil, so DTO votes. It's a discussion document now excluded methods. And then moving into our research priorities about which we discussed. And then our PPM updates. And is that the end there? Did we just fly through all those? Please go ahead, Wood.

MS. ARSENAULT: You can move through them and I'll read them.

MR. POWELL-PALM: I guess, I'll just scroll and don't read everyone all, they post quickly.

MR. TURNER: There were a couple of
things I noted there, Nate. So there was you --
as you were going through the votes, there was an
L-malic acid discussion that I think you may have
higher up on the list, you might have seen --

MR. POWELL-PALM: Thank you. If we
can scroll back to that.

MR. TURNER: And also to my question
about BTO. Do we indeed have a vote in the fall
or is that no longer on there?

MR. POWELL-PALM: Super good question,
I would say for now, it's listed as a vote in the
fall, so just by procedure, we've done discussion
document and then likely a normal procedure goes
to proposal. I think it'll be a discussion with
the program to see if we do have a path forward
and we'll be able to update the community after
that.

MR. TURNER: Okay.

MR. POWELL-PALM: Thank you for that
question. Carolyn, please go ahead.

DR. DIMITRI: Nate, is it out of order
if I say something about climate change?
MR. POWELL-PALM: If you wouldn't mind in just one second, hold it off.

DR. DIMITRI: Okay.

MR. POWELL-PALM: We'll conclude the agenda review and then we can go into other business. So please standby. Any other questions or comments on our agenda?

MS. ARSENAULT: Maybe --

MR. POWELL-PALM: Yes.

MS. ARSENAULT: Added that line item onto your work agenda. So it may be in the CACS section at the top. Climate-Smart -- here we go. If Carolyn wants to address it here.

MR. POWELL-PALM: Sure. Yes. Let's go ahead. If you'd like to talk about it, Carolyn.

DR. DIMITRI: I just have two very fast things to say because I see that we have coming up for a vote in the fall meeting, So I just wanted to let people know that we'll probably -- we'll put something out on the open docket for comments before then, so they will have a chance to give input and then also if anyone has any thoughts about
climate change in organic and they want to talk
to me, they can just reach me through my NYU e-mail
address, and I'll be happy to talk to anyone who
has an interest in the topic.

MR. POWELL-PALM: Thank you for that.
I would also just put out to the community if
anyone is applying for Climate-Smart agriculture
grants as part of this billion dollars for
Climate-Smart commodity solutions, please e-mail
me. I would love to know what the community is
doing out there and how we might inform the writing
of this document to reflect the hard work that's
going on and the ideas that are already being
implemented and explored through that grant part
making process. So please be in touch.

All right. So that pretty much
concludes our review of our upcoming semester's
agenda. Any other questions from folks? Hearing
none. Great work through the deferred votes.
It's our chance that normally we would welcome our
new members now. And I think that we have, you
know -- we can't express how excited we are to have
you four with us. This is really a great honor to have your expertise and really just by show of this meeting, how ready to run you all were. It was kind of a late appointment. You all arrived and got your letters a little bit later than might be optimal, but you have just thrown yourselves into the work. So I can't thank you enough for that and for the insights and deep respect for the community that you brought to this meeting. So the community thanks you, your fellow Board members thank you. And, hopefully we get to see you in the fall. It's so you won't have nearly as long of a delay in getting to meet your fellow Board members as my class and the class after us have. And I think that's going to be a really special opportunity to see you all in person. So thank you so far for your service and for your participation and for all of your respect and the dignity you give to this process. Any other business? Any other questions, ideas? Brian, please go ahead.

MR. CALDWELL: Well, first I feel like
I want to apologize to everybody else on the Board because I feel like my role here has been to give everybody else more work. And just to turn that around a little bit. I just wanted to say that. If we can make it some sort of an effort on moving the inerts question forward. I would be very happy to work on that no matter --

MR. POWELL-PALM: Please go ahead, Brian.

MR. CALDWELL: Oh, just no matter what committee may get it, I would be glad to really help on that, because it just seems like such a quagmire for us. So just wanted to put that out there.

MR. POWELL-PALM: Thank you. I think it's telling me an all hands on deck. So this is an issue of our day to try to figure this out across subcommittees. So appreciate your work there.

Kyla, please go ahead.

MS. SMITH: I would just say that we're just we're in a bit of a holding pattern though. Until the program put out that ANPR, who already
like handed inerts like back to them. And so until like they put out that advanced notice of proposal making and the ideas come back in, then they have to sort of sort out what those maybe and then it may come back to us. So I really appreciate your enthusiasm, Brian, and hopefully it doesn't take too long for that to get rolling. If it should come back to the Board and that you're still on the Board because it happens so much really, you know, carry that as the torch bearer would be hugely helpful.

MR. POWELL-PALM: Thank you for that. Absolutely. Any other closing thoughts? Well, we've said it before you all are the best. This is really has been a great meeting. Thank you so much for the time and energy put into this. And Michelle, please go ahead.

MS. ARSENAULT: I don't want to interrupt you, you want to finish your thoughts?

MR. POWELL-PALM: I can finish my thought. I think it was representative of really hard work done throughout the year -- throughout
this last semester to hit so many 15 to 0 votes
where folks felt informed, conversations had been
thorough, the work and the homework had been done.

So I think that is really reflective of a process
working well. And so, thank you. There's a lot
of calls. I think the community might not quite
understand how many hours go into this. But it's
an easy 15, 20 hours every week, both in committees
where we're meeting formally but informally with
conversations between each other. And and it all
is very shiny when we get to this point, but it
is an extraordinary amount of work. And I just
want to commend all of my fellow Board members on
taking the time away from your jobs, from your
families, in support of our community to make our
community what it is. So thank you again.

MS. ARSENAULT: Hear, hear. I just
want to -- oh, go ahead, Nate.

MR. POWELL-PALM: No, please go ahead.

MS. ARSENAULT: I just want to mention
two quick things then I'm going to turn it over
to Jenny as the designated federal officer to go
ahead and close the meeting. But here are the things in my brain. So we will have a nomination coming up this year. We're waiting for the announcement to get approved so we can get it posted in the federal register. We will have one vacancy to fill come January of 2023. So the announcement should be out in the spring of this year. And that's Rick who is leaving us in January of 2023, he's in the environmental protection and resource conservation seat. So and then next slide, Jared.

Thank you. Just -- I think you guys have seen the same slide now for a couple of meetings. Not much movement here, but we are slated to be in Sacramento in the fall. Still working on the spring 2023 meeting and the fall 2023 meeting we're slated to be in Providence, Rhode Island. Allison --

MR. POWELL-PALM: Yes. Allison, please go ahead.

MS. JOHNSON: I just wanted to make sure we get one more big thanks sent to Michelle. You made it so easy to slide into this group and make
sure we have everything we need. So thank you.

MR. POWELL-PALM: I can't echo that enough. Man, thank you, Michelle.

MS. JOHNSON: And the treats. I loved the treats.

MR. POWELL-PALM: Even though we're virtual, Michelle still got us treats. That should say something about a really effective manager. So thank you, Michelle. That was yes, you're incredible. And you made this work possible. All right. And with that, I'll hand it back to Jenny.

DR. TUCKER: All right. I want to thank the entire Board for a wonderful meeting, incredible discussions, incredible group. I also want to thank the National Organic Program team. I do want to close with a kind of behind the scenes project that has been going on for months that we are now able to launch and actually launched this afternoon during the meeting. So I just want to point it out for the -- looks like we have 86
diehards that are still on the line with us as well as the Board. Today looks like I'm not allowed to share my screen or I would share it for you. Today, we launched a new petition substances database so for all the folks out there who are involved in materials, reviews, and who are tracking all of these substances through the sunset process, all the detailed technical work that happens in these meetings, our technology is a huge enabler to everything we do and so the team heard you about the need for a better online index for managing petition substances. And Andie Holm, has led this project for the last several months. So Andie, I just clicked it in, chatted it in so you can double click on it, scroll down to see the National Petitioned Substances Database. But I did want to highlight both that is a tool, but also the behind the scenes work that happens as Nate just mentioned with the entire Board, but also across the standards division and elsewhere. We are one big global partnership and if technology is important for binding us all and the people are
important for making the work happen. So again, congratulations and thanks. And Nate Powell-Palm, thank you for your leadership during this meeting and as the Board chair, you did a fabulous job as your first virtual meeting and you'll do another fabulous job in the fall, ideally in face-to-face, where we will all be able to give each other hugs at this point in the process. So with that, I think we are going to formally adjourn this meeting of the National Organic Standards Board with many, many thanks and well wishes for a safe and happy and smooth path forward. So be well wherever you maybe and take good care. Bye bye.

MR. POWELL-PALM: Thank you, Jenny,

MS. SMITH: Thanks, Jenny. Maybe at the fall meeting, there will be less issues with the microphone un-muting and muting because we've all been having to do that on Zoom for so long. Because that's like just one thing I remember from in-person meetings where everyone is like people forget to un-mute that.
(Whereupon, the meeting in the above-entitled matter was concluded at 3:30 p.m.)